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NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

MBA PROFESSIONAL REPORT

**Cost Benefit Analysis of MARSOC Marines
in the Naval Postgraduate School
Department of Defense Analysis**

**By: Robert B. Dyer and
Ryan D. Pierce
December 2011**

**Advisors: Kalev Sepp
Keenan Yoho**

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**COST BENEFIT ANALYSIS OF MARSOC MARINES
IN THE NAVAL POSTGRADUATE SCHOOL
DEPARTMENT OF DEFENSE ANALYSIS**

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Ryan D. Pierce, Lieutenant, United States Navy

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

**NAVAL POSTGRADUATE SCHOOL
December, 2011**

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**COST BENEFIT ANALYSIS OF MARSOC MARINES
IN THE NAVAL POSTGRADUATE SCHOOL
DEPARTMENT OF DEFENSE ANALYSIS**

ABSTRACT

The United States Marine Corps does not have a specific professional military education program for Special Forces. Furthermore, it does not send any of its officers or NCOs to the Naval Postgraduate School to attain a Master's Degree in Defense Analysis. Studies completed in sister services have shown this program to be invaluable to its future staff officers. This project will conduct a cost-benefit analysis of the United States Marine Corps sending Marine Special Forces Officers through a dedicated training pipeline, and more specifically the Naval Postgraduate School Defense Analysis Programs (Irregular Warfare, Information Operations, Terrorist Operations and Financing). This thesis will aid the Marine Corps in determining the costs and benefits (with dollar amount) of sending its officers through the Naval Postgraduate School's DA Program.

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LIST OF ACRONYMS AND ABBREVIATIONS

AAR	After Action Report
ACCET	Accrediting Council for Continuing Education and Training
AFSOC	Air Force Special Operations Command
AOA	Analysis of Alternatives
ARSOF	Army Special Operations Force
BAH	Basic Allowance for Housing
CA	California
CBA	Cost-Benefit Analysis
CJCS	Chairman, Joint Chiefs of Staff
CJCSI	Chairman, Joint Chiefs of Staff Instruction
CJSOTF	Combined Joint Special Operations Task Force
CJSOTF-A	Combined Joint Special Operations Task Force – Afghanistan
COCOM	Combatant Command (Command Authority)
COIN	Counter Insurgency
DA	Defense Analysis
D.C.	District of Columbia
DET	Detachment
DLI	Defense Language Institute
DON	Department of the Navy
DOS	Department of Operational Studies
EWS	Expeditionary Warfare School
FID	Foreign Internal Defense
FL	Florida
GWOT	Global War on Terror
IO	Information Operations
IW	Irregular Warfare
ITC	Individual Training Course
JCS	Joint Chiefs of Staff

JSOTF	Joint Special Operations Task Force
JSOU	Joint Special Operations University
MAGTF	Marine Air Ground Task Force
MARSOC	Marine Special Operations Command
MARSOF	Marine Special Operations Forces
MCPP	Marine Corps Planning Process
MCSOCOM Det	Marine Corps Special Operations Command Detachment
MCU	Marine Corps University
MHA	Military Housing Area
MSOC	Marine Special Operations Company
MSOT	Marine Special Operations Team
MDMP	Military Decision Making Process
MEU	Marine Expeditionary Unit
MEU(SOC)	Marine Expeditionary Unit (Special Operations Capable)
MILCON	Military Construction
Mo.	Month
MOA	Memorandum of Agreement
NATO	North Atlantic Treaty Organization
NAVSPECWARCOM	Navy Special Warfare Command
NC	North Carolina
NPS	Naval Postgraduate School
NSHQ	NATO Special Operations Headquarters
NSW	Naval Special Warfare
NSWDG	Naval Special Warfare Development Group
O-##	Officer, ## Rank
OPMEP	Officer, Professional Military Education Program
OPTEMPO	Operational Tempo
OJT	On the Job Training
PLC	Platoon Leader Course
PME	Professional Military Education
SEAL	Sea-Air-Land team
SecDef	Secretary of Defense

SITREP	Situation Report
SF	Special Forces
SNCO	Staff Non-Commissioned Officer
SOC	Special Operations Capable
SOCENT	Special Operations Command Central
SOCOM	Special Operations Command
SOF	Special Operations Force
SR	Special Reconnaissance
StratPlan	Strategic Plan
TAOG	Task Organization
TLC	Team Leader Course
TTP	Tactics, Techniques, and Procedures
UNIV	University
USASOC	United States Army Special Operations Command
USMC	United States Marine Corps
USSOCOM	United States Special Operations Command
UW	Unconventional Warfare
VTC	Video Tele Conference

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Major Robert Dyer would especially like to thank Col Neil C. Schuehle for his continued guidance and mentorship. This thesis was written for you and we are hoping it broadens the opportunities for MARSOC Officers and their SOF PME training. Thank you, as always, for getting me into NPS and that other thing before this.

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To Hunter: Thank you for showing us the meaning of tough.

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I. BACKGROUND

A. MARINE SPECIAL OPERATIONS COMMAND

SOCOM was created in 1987 by the Nunn-Cohen Act and the Marine Corps had resisted joining the unit since inception. The common phrase had been “all Marines are special” and therefore did not feel they needed to join the separated command.¹

The Marine Corps has carried a special operations capability with it, be it from individual Marines, or specially formed units, for years before the idea of SOCOM or MARSOC came to be. Raiders from World War II became Reconnaissance Battalion and Force Reconnaissance Marines. Additionally, Marines participated in several special operations units as attachments though never on a permanent basis.

As units, Marine Expeditionary Units (MEUs) did specific training pre-deployment in order to fully qualify them as Special Operations Capable (SOC). MEU(SOC)s were the Marine Corps’ formal answer to a Special Operations Capability requirement and served as such for several years until February 2003, when USSOCOM and the USMC entered into a Memorandum of Agreement (MOA) to establish an initial Marine corps force contribution to USSOCOM.² In a subsequent Deployment Order, the Secretary of Defense (then Donald Rumsfeld) tasked both the Commander of USSOCOM and the Commandant of the Marine Corps to provide a recommendation for this force contribution to the Chairman, Joint Chiefs of Staff (CJCS), no later than January, 2005.³

Initial pushback to the Marine Corps joining USSOCOM from other services stemmed from two main events. First, many Army Special Forces, Navy SEALs, and even some reconnaissance Marines felt that the formation of a Marine Special Operations

¹ Piedmont, LtCol, John (2010). *DET ONE, U.S. Marine Corps, U.S. Special Operations Command Detachment, 2003-2006*. Washington D.C.: History Division, United States Marine Corps.

² Joint Special Operations University (2007). *MCSOCOM Prrof of Concept Deployment Evaluation Report*. Hurlburt Field: Joint Special Operations University.

³ Joint Special Operations University (2007). *MCSOCOM Prrof of Concept Deployment Evaluation Report*. Hurlburt Field: Joint Special Operations University.

Unit violated three out of five SOF truths shown in Figure 1. Most notably, these service members felt that MARSOC was being created in the wake of 9/11 which was a direct negation of the fourth truth. Additionally, the selection process was not widely known and many felt that Headquarters Marine Corps was merely selecting a bunch of Marines for MCSOCOM Detachment (Det) One, violated the quality over quantity truth. Finally, after the successful deployment of MCSOCOM Det One, MARSOC itself was formed rather quickly, giving the impression that it was a force that was mass-produced. Second, upon successful deployment from MCSOCOM DET 1 as a test group, the first full deployment of Marine Special Operations Company F (Fox Company) ended with the firing of its Commanding Officer, Executive Officer, and several civilian casualties in Afghanistan.⁴ Through all of this, MARSOC has remained intact and has grown from two battalions to a full sized regiment. It also began its own full qualification course held in Camp Lejeune, North Carolina.⁵



Figure 1. SOF Truths (From ⁶)

The MARSOC Training process begins with an Assessment and Selection Phase (A&S) that can last up to two months. Once a Marine speaks to a MARSOC recruiter

⁴ Burns, R. (2007, March 28). *Marine Unit Ordered out of Afghanistan*.

⁵ Marine Corps, U. S. (2011, Dec 3). *U.S. Marine Corps Forces, Special Operations Command MARSOF Individual Training Course (ITC)*.

⁶ Joint Forces College (2010, January). Retrieved November 30, 2011, from Joint Forces Staff College: http://blackboard.jfsc.ndu.edu/ajpme_lessons/lesson12/s012/sco070/s012_sco070_008.html

and is assessed to be a qualified candidate that Marine will then attend the assessment and selection phase while still a part of his previous command. If after the A&S Phase the Marine is deemed a candidate for the full training course, he then goes back to his command and prepares for the Individual Training Course (ITC). MARSOC ITC lasts approximately seven months and has several phases. Of note, the final phase of training is called the Irregular Warfare Phase. If a Marine successfully makes it to this final phase, he must still demonstrate the capability to learn, adapt, and operate in an Irregular Warfare environment.⁷

B. MARINE CORPS PROFESSIONAL MILITARY EDUCATION

1. Military Directives on Education

a. Chairman of the Joint Chiefs of Staff

The Chairman of the Joint Chiefs of Staff Instruction 1800.01D (2009), entitled *Officer Professional Military Education Policy (OPMEP)* describes in full detail the intention and direction of the Chairman, Joint Chiefs of Staff regarding education for military officers. Paragraph 4a, of that document is the Chairman's Vision and it specifically states: "PME—both Service and Joint—is the critical element in officer development and is the foundation of a joint learning continuum that ensures our Armed Forces are intrinsically learning organizations. The PME vision understands that young officers join their particular Service, receive training and education in a joint context, gain experience, pursue self-development, and, over the breadth of their careers, become the senior leaders of the joint force."⁸

With the United States involved in two theaters of operation for the last seven years (at least), creating the current operational tempo (OPTEMPO) for Marine Special Operations Forces Officers, many officers are relying on OJT professional

⁷ SSgt D Ostberg, ITC Instructor, personal communication, November 28, 2011

⁸ Chairman, Joint Chiefs of Staff (2009). *Chairman of the Joint Chiefs of Staff Instruction 1800.01D - Professional Military Education*. Washington DC: CJCS.

military education. Other education pipelines must be offered in order to meet with the CJCS guidelines and vision. Specifically, “JPME should position an officer to recognize and operate in tactical, operational, and strategic levels of national security, enhancing the total force capability and capacity to wage, as necessary, traditional and irregular warfare.”⁹

2. PME Pipeline (Junior Officer Track)

Marine Officers are required to complete either a resident or non-resident PME course called Expeditionary Warfare School (EWS). The resident course starts in August and lasts until May. Completion of this course guarantees PME requirements have been met for promotion. Though Marine tactics courses are shaped around Marine Air Ground Task Force (MAGTF) concepts, which are not regular by nature, they are not valid training for Irregular Warfare. Table 1 shows the current list of courses required to complete EWS.

Warfighting / Information Operations	Combined Arms Maneuver	Marine Corps Planning Process (I)	Marine Corps Planning Process (II)	EWS Operation Plan and Orders	Task Organization (TAOG)
MAGTF Operations Ashore (I)	EWS Marine Air Command and Control Systems	EWS Fire Support Coordination	MAGTF Operations Ashore (II)	Expeditionary Operations (I)	Force Deployment Planning and Execution Timed Phased Force Deployment Data
EWS Ship to Shore Movement	Expeditionary Operations (II)	MPF Staff Planning: Mission Analysis	MPF Staff Planning: Marshaling and Movement	MPF Staff Planning: Arrival and Assembly	MPF Staff Planning: Reconstruction and Maintenance

Table 1. Expeditionary Warfare Course Matrix

⁹ Chairman, Joint Chiefs of Staff (2009). *Chairman of the Joint Chiefs of Staff Instruction 1800.01D - Professional Military Education*. Washington DC: CJCS.

C. JOINT SPECIAL OPERATIONS UNIVERSITY (JSOU)

1. The Joint Special Operations University Vision

Strategic Plan Academic Years 2006–2013 outlines the vision for JSOU. On Page eight under Vision it specifically states:

It is designed as an institution of the future that incorporates new and innovative curriculum, instructional programs and teaching methods, while easily adapting to a changing global environment. Our faculty recognizes that education is a long-term commitment and that JSOU must set high academic standards to which others aspire.¹⁰

2. SOF Leadership Competency Model

JSOU created the SOF Leadership Competency Model, shown in Figure 2 to identify what they felt were the competencies required of joint SOF leaders based upon conditions within which joint SOF would be expected to function.



Figure 2. SOF Leadership Competencies (From ¹¹)

¹⁰Joint Special Operations University (2006). *Joint Special Operations University Strategic Plan: Academic Years 2006-2013*. Tampa: JSOU.

¹¹ Joint Special Operations University (2006). *Joint Special Operations University Strategic Plan: Academic Years 2006-2013*. Tampa: JSOU.

3. JSOU Certification

There are two main departments that contain most of the courses offered from JSOU: The Department of Strategic Studies and the Department of Operational Studies. As most of the Strategic Studies focus on the Staff Officer level (O-4 and above), this cost-benefit analysis (CBA) of thesis will focus on the Department of Operational Studies (DOS). Completion of all the courses in the DOS requires a total of 89.5 days. Upon completion of all courses, graduates from JSOU attain a certificate of completion. In 2008 JSOU became an accredited institution through the Accrediting Council for Continuing Education and Training (ACCET), which is a national accrediting agency recognized by the Department of Education.

In addition to this achievement, JSOU has worked hard to move offices and staff from Hurlburt Field to MacDill Air Force Base located in Tampa, Florida. Our focus is ongoing to create an academic environment complete with offices, conference rooms and classrooms within the Pinewood facility.¹²

D. NAVAL POSTGRADUATE SCHOOL DEPARTMENT OF DEFENSE ANALYSIS

This program develops critical thinkers and capable operators, planners and commanders for the rigors of irregular warfare (IW). The Special Operations/Irregular Warfare master's degree program was created in 1992 from a need found and researched by 13 navy SEALs (one of which being Admiral William H. McRaven). While working through their own degrees at NPS, they brought forward the need for a curriculum that would focus on the "unconventional" problems encountered by personnel assigned to USSOCOM.

The Special Operations and Irregular Warfare curriculum provides a focused curriculum of instruction in irregular warfare. Courses address counterinsurgency, terrorism and counterterrorism, unconventional warfare, information operations, and other "high leverage" operations in U.S. defense and foreign policy. The core program also provides a strong

¹² Joint Special Operations University (2011). *The Link to Joint SOF Knowledge: Academic Handbook*. Tampa: JSOU.

background in strategic analysis, decision modeling, organization theory, and formal analytical methods.¹³

The NPS DA Program currently has students from Air Force Special Operations Command (AFSOC), Naval Special Warfare Command (NSW), Army Special Forces Command (SF/Green Berets), as well as International Officers representing SOF from allied and partner countries. Currently there is a single intelligence Marine Staff Non-Commissioned Officer (SNCO) attending the NPS DA program while a full time student at the Defense Language Institute (DLI).

Currently, the DA department has over 140 joint SOF, conventional, and international officers each year. It also boasts two nationally prominent research centers, DoD's Information Operations Center for Excellence, and the Common Operations Research Environment Lab which acts as a sort of intel-ops fusion center. The NPS DA program was recognized by USSOCOM and the Joint Staff as a "center of gravity" program in the development of Irregular Warfare strategists and campaign planners.¹⁴

E. NAVAL SPECIAL WARFARE PLATOON LEADER'S COURSE

The Naval Special Warfare community has long involved itself with the NPS DA program as they were the founding members of the DA department. A recent survey discussed in depth in a later chapter doubled the quota of Navy SEALs attending the NPS DA program. Still, there is no way to send every SEAL through the NPS DA program. As such, one of the SEALs from the DA program published a thesis in 2007 outlining the need for the rest of the SEAL junior Officer community to receive SOF PME as well.¹⁵ That report, by LCDR Thomas Donovan, USN, called for the creation of a SEAL Platoon Leader's Course to be led largely by the SEAL community and heavily outsourced for its

¹³ Naval Postgraduate School Defense Analysis Department. (2011, November 16). *NPS DA Department Academics*.

¹⁴ Naval Postgraduate School Defense Analysis Department. (2011, November 16). *NPS DA Department Academics*.

¹⁵ Donovan, T. (2007). *Structuring Naval Special Warfare Junior Officer Professional Military Education*. NPS Graduate School of Business and Public Policy, Monterey, CA.

teachers from both JSOU and NPS. That course continues to exist today, operated by NAVSPECWARCOM, taught by JSOU and NPS teachers, to educate SEAL junior officers.

Currently, MARSOC Officers have been able to attend this course from time to time on an audit basis as there is no other option currently utilized for in-depth SOF PME. The class size must be kept at a manageable level, so MARSOC Officer participation will always be kept to a minimum most likely at the determination of Naval Special Warfare Command (NAVSPECWARCOM) who owns the course.

II. METHODOLOGY

This section presents the method in which the CBA will be conducted, including data collection methods and key assumptions. This section further defines the steps of a CBA that will be taken to conduct the analysis.

A. DATA COLLECTION

1. Naval Postgraduate School Defense Analysis Program

Data for the NPS DA Program came from conversations with several DA professors currently in the department as well as a report conducted by NAVSPECWARCOM which essentially served as an audit for SEALs going through the DA program. That report, titled Naval Postgraduate School Department of Defense Analysis Review (Special Operations and Irregular Warfare Graduate Degree Program) served as a guide and audit for much of the findings in the DA Program (Appendix A). Additional budget information was gathered through a phone interview with R. Alexander, a comptroller at NPS, as well as NPS President Notice for tuition costs.¹⁶

2. USMC PME (Junior Officer Pipeline)

The Marine Corps University establishes and maintains the pipeline for resident and non-resident PME of Marine Officers. Much of the data collection for the USMC PME pipeline came from the MCU Stratplan 2012–2020. Additional information comes from the online Marine Corps University portal: *MarineNet*.¹⁷

¹⁶ President, Naval Postgraduate School. "Naval Postgraduate School Notice ser 000/018." Monterey, CA, April 26, 2011.

¹⁷ United States Marine Corps (2011). *Marine Corps University: Marine Corps University Strategic Plan 2012-2017*. Quantico: Marine Corps University.

3. Joint Special Operations University

Data was collected for Joint Special Operations University was retrieved from the Joint Special Operations University Strategic Plan, Academic Years 2006–2013, published in May of 2006. Additional data was collected from interviews with JSOU attendees as well as the JSOU Academic Handbook for Calendar year 2011–2012.¹⁸¹⁹

4. Navy SEAL Platoon Leader's Course

Data collection for the Navy SEAL Platoon Leader's Course came from previous attendees as well as the recommendations section of Donovan (2007).²⁰

5. MARSOC Team Leader's Course

For the MARSOC Team Leader's Course, data collection came from various sources. As there is no Team Leader's Course to speak of as yet, interviews were conducted with various MARSOC current and former personnel. This ranged from current enlisted SNCO Trainers teaching the MARSOC ITC, to retired MARSOC Officers, to current MARSOC Team Leaders.

B. ASSUMPTIONS ASSOCIATED WITH THE CBA OF MARINE OFFICERS ATTENDING THE NPS DA PROGRAM

Several terms are used throughout this CBA and it is important to establish the definition of several of those terms before beginning the analysis.

MARSOC Officer: This is an officer currently on orders to MARSOC that has successfully completed the MARSOC Individual Training Course and has joined the unit.

Team Leader: MARSOC is organized by groups of 14 operators led by (on average) a Marine O-3 (Captain). This Officer leader is designated as a Team Leader.

¹⁸ Joint Special Operations University (2006). *Joint Special Operations University Strategic Plan: Academic Years 2006-2013*. Tampa: JSOU.

¹⁹ Joint Special Operations University (2011). *The Link to Joint SOF Knowledge: Academic Handbook*. Tampa: JSOU.

²⁰ Donovan, T. (2007). *Structuring Naval Special Warfare Junior Officer Professional Military Education*. NPS Graduate School of Business and Public Policy, Monterey, CA.

Several assumptions must be made in order to conduct a cost-benefit analysis. The assumptions below were used to focus the analysis on the key elements that have an impact throughout the CBA process.

1. This CBA will apply to Marine Officers in MARSOC with at least two operational tours. While not required, it is recommended that at least one of these tours be while in a MARSOC billet.
2. MARSOC Officers in this CBA will be Company Grade Officers with the highest rank of Captain.
3. As MARSOC belongs to USSOCOM, it is assumed that Marine Officers will fill roles in joint SOCOM staffs on a permanent basis, just as other SOCOM Commands are required to fill billets.
4. While this CBA analyzes different options for MARSOC Officers to increase their SOF PME, this will not serve as a replacement for the current PME requirements levied on all Marine Officers.

C. STEPS OF THIS COST-BENEFIT ANALYSIS

The traditional steps of a CBA are a logical process that eventually leads to a recommended course of action, based on the constraints, given factors, and costs/benefits associated with each alternative action. As defined by Boardman (2006),²¹ the steps of the CBA are:

1. Specify the set of alternatives
2. Decide whose benefits and costs count (standing)
3. Catalogue the impacts and select measurement indicators
4. Predict the impacts quantitatively over the life of the project
5. Monetize (attach dollar values to) all impacts
6. Discount benefits and costs to obtain present values
7. Compute the net present value of each alternative
8. Perform sensitivity analysis
9. Make a recommendation

²¹ Boardman, Anthony et al. *Cost-Benefit Analysis: Concepts and Practice*. Third Edition. New Jersey: Prentice Hall, 2006.

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III. IDENTIFY SET OF ALTERNATIVES

According to Boardman (2006), the first step in a CBA is to identify the set of alternatives.²² Four alternatives to status quo have been identified which will be analyzed and presented.

A. STATUS QUO

Currently, the only Special Operations Forces (SOF) education MARSOC Officers get is from the initial qualification course. From time to time, MARSOC Officers have been able to get into the Navy SEAL Platoon Leader's Course on an audit basis. Additionally, private security training companies are hired to train the entire Marine Special Operations Team in unconventional warfare Tactics, Techniques, and Procedures (TTPs). Otherwise, the only Professional Military Education a MARSOC Officer receives is through the required PME for all Marine Officers.

B. ALTERNATIVE ONE: JOINT SPECIAL OPERATIONS UNIVERSITY

The first alternative is to train MARSOC Officers through the Joint Special Operations University (JSOU). JSOU educates several officers and SOCOM personnel every year through several different programs.

The JSOU mission is to educate Special Operations Forces executive, senior, and intermediate leaders and selected other national and international security decision-makers, both military and civilian, through teaching, research, and outreach in the science and art of Joint Special Operations.²³

This alternative would have Officers required to complete a full course of instruction per the JSOU syllabus the Department of Operational Studies (DOS). There

²² Boardman, Anthony et al. *Cost-Benefit Analysis: Concepts and Practice*. Third Edition. New Jersey: Prentice Hall, 2006.

²³ Joint Special Operations University. (2010, September 13). *Home page*. Retrieved from: <https://jsou.socom.mil/Pages/Default.aspx>

are several locations for satellite JSOU schools separate from the main location at MacDill AFB in Tampa, Florida. However, for the Department of Operational Studies, this analysis found most of the courses either at MacDill AFB in Tampa, Florida, or at Fort Bragg, North Carolina. To make the common comparison between all alternatives, the Officer would need to complete the entire JSOU DOS instruction which would take 89.5 days (often just referred to as 3 months).

C. ALTERNATIVE TWO: CREATE A NEW MARSOC TEAM LEADER COURSE (MARSOC TLC)

The second alternative would be to create a SOF PME course tailored specifically to MARSOC Team Leaders and other MARSOC Officers. Just as the Naval Special Warfare community created a PME course for junior Officers, so too could MARSOC create an entire education pipeline to train MARSOC Team Leaders in advanced SOF PME topics. This would require a complete addition to the current training pipeline for MARSOC Officers. As the Naval Postgraduate School currently serves as the premiere education center for SOF PME, MARSOC Officers would come to NPS for a period of one full academic quarter, which lasts approximately 10 weeks. While here, MARSOC Officers will attend one class with the rest of the student population already enrolled in the full DA curriculum. This will give them a chance to interact with officers from other commands as well as give exposure to the style of learning that happens here at the full course. Finally, attending a full course from NPS will give the MARSOC Officer applicable credits to transfer for his other graduate education courses. Upon completion of the TLC, each officer will receive a certificate of completion aside from the transferrable credits from the full-length class. The following shows a typical outline of the daily routine for the proposed course. Full Defense Analysis Matrices for the three different Curricula are in Appendix B.

1. Period 1 (0800–1000): Introductory Class with Student Population

For reasons noted above, this will be the single class period that is integrated with the regular student population. This is also the only course where full credits from the

class will be applicable to the individual Marines' postgraduate studies for different education sources.

2. Period 2 (1000–1200): MARSOC TLC Period 1

During this second class period of the day, the entire MARSOC TLC will be consolidated into one classroom for their first shortened course of the day. From the possible 15 core courses offered in all three curricula in the DA Department, 10 of these courses will be taught in one week intervals during this period. Students will get at least an introduction to the topic, be offered a full syllabus to take back to their unit for continued self-study, and complete at least one assignment that would normally come from that syllabus. This will continue for the remainder of the Team Leader's Course for all abbreviated core classes.

3. Period 3 (1300–1500) MARSOC TLC Period 2

For the third and final period of the day, MARSOC Officers will be given abbreviated versions chosen from the several Track Option courses offered in the three curricula from the DA Department. As with the core classes, officers will receive a full syllabus along with materials guide and be required to complete at least one assignment per abbreviated course over the entire period.

D. ALTERNATIVE THREE: NAVY SEAL PLATOON LEADER'S COURSE

The third alternative involves sending MARSOC Officers to the same SOF PME pipeline used by Navy SEALs. In Thomas Donovan's December 2007 Thesis "Structuring Naval Special Warfare Junior Officer Professional Military Education" he recommends the formation of the Navy SEAL Lieutenant's Career Course (SLCC).²⁴ His work eventually led to the creation of the SEAL Platoon Commander's Course which runs in Coronado for appropriate level SEAL Officers. Currently, MARSOC Officers

²⁴ Donovan, T. (2007). *Structuring Naval Special Warfare Junior Officer Professional Military Education*. NPS Graduate School of Business and Public Policy, Monterey, CA.

have the ability to attend this course from time-to-time on an audit basis. Nothing regular has been established for a permanent seat in the course for MARSOC Officers. This alternative would mean at least one permanent seat (preferably more) for MARSOC Officers to attend.

E. ALTERNATIVE FOUR: NAVAL POSTGRADUATE SCHOOL DEFENSE ANALYSIS PROGRAM

The fourth alternative is to allow MARSOC Officers to attend the Naval Postgraduate School Defense Analysis curriculum. The NPS DA has graduated many officers (over 680)²⁵ from multiple segments of SOCOM as well as several international Special Forces Officers. To date, there has not been a single MARSOC Officer to graduate from this program.²⁶ This program requires a MARSOC Officer to have 18 months dedicated solely to the education program for which that Officer would depart with a Master's Degree in Defense Analysis. The Master's Degree comes in one of two graduate curricula, one for the study of special operations and irregular warfare, the other focusing on joint information operations. The special operations and irregular warfare curriculum is the only one of its kind, and is sponsored by the Special Operations Command. The curriculum on joint information operations was established at the direction of the deputy secretary of defense, and is sponsored by the undersecretary for policy²⁷. The Special Operations and Irregular Warfare curriculum provides a focused curriculum of instruction in irregular warfare. Courses address counterinsurgency, terrorism and counterterrorism, unconventional warfare, information operations, and other "high leverage" operations in U.S. defense and foreign policy. The core program also provides a strong background in strategic analysis, decision modeling, organization

²⁵ Naval Postgraduate School Defense Analysis Department. (2011, November 16). *Da*

History. [Http://www.nps.edu/Academics/Schools/GSOIS/Departments/DA/About_Us/DA_History.html](http://www.nps.edu/Academics/Schools/GSOIS/Departments/DA/About_Us/DA_History.html)

²⁶ Dr. Kalev Sepp, Senior Lecturer NPS DA Program, personal communication, 15 August 2011

²⁷ Naval Postgraduate School Defense Analysis Department. (2011, November 16).

Message from the Chair.

http://www.nps.edu/Academics/Schools/GSOIS/Departments/DA/About_Us/DA_Chair_Msg.html

theory, and formal analytical methods²⁸. The Joint Information Operations curriculum focuses on the strategic and operational dimensions of information—relative to the use of force—as an instrument of statecraft. Graduates will be able to develop information strategies to support military action by taking advantage of information technology, exploiting the growing worldwide dependence on automated information systems, and capitalizing on the near real time global dissemination of information to affect an adversary’s decision cycles—all with the goal of achieving information superiority. This capability is dependent upon students acquiring a thorough understanding of the enduring nature of war.²⁹

²⁸ Naval Postgraduate School Defense Analysis Department. (2011, November 16). *Special Operators/Irregular Warfare* (699).
<http://www.nps.edu/Academics/Schools/GSOIS/Departments/DA/Academics/SpecOps.html>

²⁹ Naval Postgraduate School Defense Analysis Department. (2011, November 16). *Information Operations*.
<http://www.nps.edu/Academics/Schools/GSOIS/Departments/DA/Academics/JIO.html>

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IV. RELEVANT BENEFITS AND COSTS

Step two of a CBA requires the analyst to decide who has standing or whose benefits and costs should be counted³⁰. This step should help identify the key players and stakeholders and define their role in the decision process.

A. KEY PLAYERS

It is important to identify key players in order to help establish the relationship each player has with the decision alternatives being made, as well as their role in the decision process. When looking at key players, there are two main factors that directly affect the decision making process; how much potential to influence the choice of alternatives the stakeholder has, and how much they care about the decision that is being made. As with any CBA, the two major factors to consider are the cost and benefit. Table 2 shows both the influence and interested shown by each stakeholder, but goes further to show the impact financially and operationally to each stakeholder.

Stakeholder	Influence	Interest	Role	Financial Impact	Operational Impact
NPS DA Program	LOW	HIGH	Supplier	None	Positive
USMC	HIGH	MEDIUM	Decision Maker	Increase	Positive
Marine Officers	MEDIUM	HIGH	Customer	None	Positive
JSOU	MEDIUM	HIGH	Supplier	Decrease	Negative
Marine Corps Univ	HIGH	LOW	Supplier	None	None
SOCOM	HIGH	HIGH	Customer	N/A	Positive
JSOC	MEDIUM	HIGH	Customer	N/A	Positive
NSHQ	LOW	MEDIUM	Customer	N/A	Positive

Table 2. Stakeholder Analysis

³⁰ Boardman, Anthony et al. *Cost-Benefit Analysis: Concepts and Practice*. Third Edition. New Jersey: Prentice Hall, 2006.

B. KEY STAKEHOLDERS

This stakeholder analysis is conducted to describe the influence, interest and role of each stakeholder, and also the affects if the NPS DA program is selected as the best alternative.

1. NPS DA Program

The NPS DA program is deemed to have a low influence over the choice of alternatives because it is a supplier only and although NPS will be directly affected by the outcome of the choice of alternatives, NPS will only adjust to the decision once it is made. NPS is judged to have an increased influence if any negative outcomes associated with its selection as an alternative are found. Currently, there is no need for the creation of a new curriculum at NPS; only the increase of additional students in an already existing program thus eliminating any impact to the Graduate School as a whole. The impact on the DA program should only be beneficial. Currently there is one Marine SNCO in the DA curriculum. He is the first Marine to ever fully complete the course and he is doing so while on full time orders to the Defense Language Institute (DLI).³¹ Adding Marines in the classroom will make course compositions more representative of the SOCOM community. From a financial standpoint, bringing another service into the DA program will not have any negative financial impacts. According to R. Alexander,³² NPS is mission funded an increase of up to 200 students can be handled under the current budget. Operationally, the DA program will see the increased benefits from diversity. The addition of Marines increases the experiences, perspectives, and ideas within the program eventually leading to better end product graduates. The overall impact to the NPS DA program is highly beneficial; therefore the DA program has a high interest in the outcome.

³¹Dr. Kalev Sepp, Senior Lecturer NPS DA Program, personal communication, August 15, 2011

³² R. Alexander, Comptroller – NPS, personal communication, November 30, 2011

2. Marine Corps

The Marine Corps has the highest influence out of all stakeholders. The USMC is the decision maker in relation to the choice of alternatives. They only have a medium interest in the choice, because their only objective is for USMC to be able to meet the requirements for the billets they are providing at Joint and Special Operations Commands. The Corps might see increased interest because it has recently evolved to have a permanent place in SOCOM. The increased support the USCM is to provide combatant commander should weigh in on their decision-making process. The addition of a dedicated education system through the NPS DA program may change the culture within the higher echelon and also show support to the SOCOM mission. In the end, Marines are filling more roles in joint staffs and notwithstanding location and mission, Marines within the staff are the minority and at a disadvantage, having not completed SOF PME of some sort.³³ The USMC needs some sort of program in order to bring some credibility and allow it to provide better mission capabilities to SOCOM.

3. Marine Officers

As not only the customer, but also the “product,” Marine Officers have a medium influence on the decision made. Feedback and demand up the administrative chain from Marine Officers, could eventually grab the attention of the main decision maker, the USMC. Financially, there is no impact on the Marine Officer in a positive or negative way, as this would be a normal 18 month tour of duty, with the same pay and benefits. Operationally, it is very positive for Marine Officers to attend the NPS DA program. The benefits can be seen both personally and professionally with an overall increase in mission capabilities as a graduate. Marine Officers have been working towards and asking for the chance to attend NPS DA for many years.³⁴ Often, Marines will accept a different program/curriculum at NPS just to be able to attend some of the DA courses.

³³ Dr. Kalev Sepp, Senior Lecturer NPS DA Program, personal communication, August 15, 2011

³⁴ Capt J. Chavez, personal communication, November 28, 2011

Although no Marine student has been able to finish the program and graduate from the DA program, they've gained valuable insight and proved that the classes offered give the Marine Officers more by way of SOF instruction than any other program available to them currently.

4. JSOU

JSOU actually serves in competition with NPS DA, and as there are many negative impacts to JSOU, the institution has more influence than NPS, but still not a high amount. JSOU has a high interest because of the residual affects both financially and operationally. If the NPS DA program becomes a success, then the USMC will send fewer Marines to JSOU, thus reducing the funding for the University. Operationally, JSOU will have fewer USMC Officers coming through the program, thus decreasing service diversity and limiting overall course value.

5. Marine Corps University

This is the name given to the Marine Corps PME program, which is currently setting the standards for Marine Officers to meet with regards to PME. They are the authority on education and they have a very high impact on the decisions made by the Marine Corps. They do however, have a low interest because their main concern is the current PME pipeline, which is unaffected by the NPS DA program. By letting the Marine Officer corps of MARSOC attend NPS DA, MCU may see it as a threat to their own program, or at the very least a defacement of their program, which may increase their interest. MCU's history of an open minded approach to education suggests they will find it beneficial to have Marines get education in as many places as possible and bring that greater knowledge back to the Marine Corps. There are no financial or operational impacts to MCU.

6. SOCOM

Although SOCOM is listed as customer, it has such a high influence, that it is almost at the decision maker level with the USMC. Marines are taking on more roles in JSOTF type staff and as such, it would behoove SOCOM to have Marines educated at a higher level of unconventional warfare. Currently, there is no such training for Marines save for the occasional SEAL Platoon Commander's course. Most of the SOF PME

completed by Marines is OJT, which per the CJCSI 1800.01D is not enough to make an officer fully qualified and well-rounded enough.³⁵ This OJT approach also negatively impacts the ability of a Marine filling a staff billet to have an immediate impact on the mission, because time is lost in training that could come from sources before a Marine reaches the staff. There is no direct impact financially to SOCOM, although there may be 2nd and 3rd order effects seen through increased knowledge, experience and planning ability of those Marines coming from the NPS DA program, vice other alternatives.

7. JSOC

JSOC is not quite as influential as SOCOM but will reap all the same benefits as SOCOM from Marines attending the NPS DA program. Just like SOCOM, JSOC also has an increasing number of Marines on their joint staff. As the numbers increase, it has become more and more common that the Marines are the odd men out when it comes to SOF education. In fact, many of the members of the joint staff have all gone through the NPS DA program and have similar education and network stories that fall right into line.

8. NSHQ

NATO Special Operations Headquarters also presents as a stakeholder, because they too have a joint staff. The common issue among the joint staff in the US is only amplified when the joint staff is international. Multinational joint staff of NSHQ actually has several of its international staff officers as graduates of NPS DA. This causes them to network with those they already know, and once again the Marine Corps is left out of the picture.

³⁵ Chairman, Joint Chiefs of Staff (2009). *Chairman of the Joint Chiefs of Staff Instruction 1800.01D - Professional Military Education*. Washington DC: CJCS.

V. CATALOGUE OF IMPACTS AND SELECTING MEASUREMENT INDICATORS

Step Three of the cost-benefit analysis requires two different tasks be completed. First, it is required to list the physical impacts of the alternatives as benefits or costs. Second, this CBA will then specify the impacts' measurement units.³⁶ Impacts and measurement indicators for the five alternatives analyzed for this CBA are broken down into several different categories. The Costs and Benefits to be looked at are:

1. Housing
2. Education
3. Operational Time
4. Quality of life
5. SOCOM Impacts
6. Other Benefits and Costs

A. HOUSING

1. Housing Costs

Housing cost calculations for this CBA are based on the 2011 rate earned by a married Marine Captain (O-3). Some programs will not meet the minimum time required on station for Basic Allowance for Housing (BAH). In these circumstances, additional costs are incurred at a per diem rate that will be needed to cover costs of lodging and food. The BAH rate calculation for programs that do not meet the minimum time required on station is an average of the BAH in Military Housing Areas (MHA) Camp Pendleton, CA (MHA CA024) and Camp Lejeune, NC (MHA NC178), as MARSOC Marines are stationed in those two locations³⁷. The distribution of personnel is 67% in Camp Lejeune and 33% in Camp Pendleton, which creates a base BAH average of

³⁶ Boardman, Anthony et al. *Cost-Benefit Analysis: Concepts and Practice*. Third Edition. New Jersey: Prentice Hall, 2006.

³⁷ Defense Travel Office (2011, November 1). Defense Travel Management Housing Allowance Rates. Retrieved November 28, 2011, from Defense Travel Management: <http://www.defensetravel.dod.mil/site/perdiemCalc.cfm>

\$1740.³⁸ Table 3 shows typical housing costs for the alternatives in this CBA. A more complete table of housing costs giving different ranks and different lodging costs for other schooling areas available for programs like JSOU can be found at the Defense Travel Management Office. Measurement units for this cost are dollars. It is also assumed that though BAH and lodging rates will rise over time, the rate of increase (inflation) will be close to the same in all geographic locations making their cost equal over time (i.e. an alternative that costs more now will likely still cost more in the future even after rates for both change a set given amount).

	BAH (\$)	Lodging/Per Diem	Length of Time	Total Housing (\$)
JSOU	1,740	152	3 Months	18,900
MARSOC TLC	1,740	126	3 Months	16,560
NSW PLC	1,740	204	1 Month	7,860
NPS DA	930	N/A	18 Months	16,740

**PER DIEM CALCULATED USING Defense Travel Management Office

Table 3. Housing Costs (From ³⁹)

Total housing calculations in Table 3 were calculated by multiplying the BAH received by the member which is a constant cost; plus any additional required payments for lodging (assumption is made that the member will stay in base lodging, at the BOQ rate, not out in town rate), meals and incidentals by the length of time it takes the member to complete the program. In the case of JSOU, NSWPL, and MARSOC TLC the \$1,740 average BAH of a MARSOC Captain was divided by 30, in order to compute a per day BAH rate. This was then added to the per diem total calculated using the Defense Travel Management Office per diem rate calculator to come up with a per day total cost⁴⁰. Once

³⁸U.S. Marine Corps Forces, Special Operations Command. (n.d.) *MARSOC UNITS*.

³⁹ Defense Travel Office (2011, November 1). *Defense Travel Management Housing Allowance Rates*. Retrieved November 28, 2011, from Defense Travel Management: <http://www.defensetravel.dod.mil/site/perdiemCalc.cfm>

⁴⁰ Defense Travel Office (2011, November 1). *Defense Travel Management Housing Allowance Rates*. Retrieved November 28, 2011, from Defense Travel Management: <http://www.defensetravel.dod.mil/site/perdiemCalc.cfm>

per day total cost was known, then simply multiplying that by the number of days required to complete the program will yield the total housing cost.

One consideration when looking at the total housing cost is that the USMC will have to pay members BAH no matter the location or length of the course. This means, that although the BAH rate in Monterey, CA is relatively high compared to most MHA's, it is still cheaper than just the additional per diem alone. For example, just the per diem for the cheapest alternative requiring additional per diem monies comes at a cost of \$3,780 (\$126 x 30days) per month, where BAH in Monterey is \$2,670. There is still the additional cost of on average, \$1,740 that the USMC must still pay to the member while they are at a non-resident course. This brings the total for the MARSOC TLC to an average of \$5,520 per month cost, and using the same method the JSOU cost comes to \$6,240 per month.

	BAH \$ (18 Mo)	Additional Cost \$	Total 18 Mo. Cost \$
JSOU – Pendleton	43,308	13,500	56,808
JSOU – Lejeune	25,164	13,500	38,664
JSOU - Average	31,320	13,500	44,820
MARSOC TLC – Pendleton	43,308	11,340	54,648
MARSOC TLC - Lejeune	25,164	11,340	36,504
MARSOC TLC - Average	31,320	11,340	42,660
NSW PLC – Pendleton	43,308	6,120	49,428
NSW PLC – Lejeune	25,164	6,120	31,284
NSW PLC – Average	31,320	6,120	37,440
NPS DA	48,060	N/A	48,060

Table 4. 18 Month. Housing Cost

Table 4 shows a baseline 18-month total housing cost. This represents the total cost to the Marine Corps over the period it would take to complete NPS DA. As can be seen by the Total 18 Mo. Cost column, even though JSOU and MARSOC TLC are only three months long, the additional cost incurred at per diem rates, creates only a small gap in total housing cost over 18 months, and in the case of marines at Camp Pendleton, CA, the cost is actually more than 18 months at NPS.

2. Housing Benefits

There are no situations currently where a housing benefit occurs.

B. EDUCATION

1. Education Cost

Not only are there housing costs associated with the different alternatives, but each of those alternatives requires educators, materials, and other resources that cost money to provide that education. Total education cost represents the education cost incurred for one student to complete one course of instruction in each of the alternatives. Analysis of the total cost of education conducted concludes that all alternatives total cost of education equal zero (\$0).

a. Joint Special Operations University

As per the JSOU Academic Handbook, “There are no tuition charges for U.S. students attending JSOU courses. All associated travel and/or per diem expenses are the responsibility of the individual’s unit or organization.”⁴¹

b. MARSOC TLC and NPS DA

MARSOC TLC and NPS DA fall under the same educational funding source. As Marines fall under the Department of the Navy (DoN), and NPS is fully mission funded, the actual cost to the Marine Corps will be zero. The current price per student at NPS is \$4,750 per student per quarter and at current capacity, even an additional 200 Marine Officers through NPS in a single year would not raise overall funding requirements.⁴² There is a possibility that Marines attending NPS for either program could increase costs significantly enough to require more funding. Currently there is availability at NPS for additional students within the DA program, but determining the capacity of the program would require its own in depth study.

⁴¹ Joint Special Operations University (2011). *The Link to Joint SOF Knowledge: Academic Handbook*. Tampa: JSOU.

⁴² President, Naval Postgraduate School. "Naval Postgraduate School Notice ser 000/018." Monterey, CA, April 26, 2011.

c. NSW PLC

MARSOC Marines are only allowed to audit the NSW PLC course, which in turn means excess capacity exists within the course⁴³. The USMC is not required to fund any of the Marines, because they are only auditing the course and no additional cost is incurred.

2. Education Benefits

The number of MARSOC Officers filling complex joint staff billets is rising each year.⁴⁴ Additionally, as the global war on terror changes in nature, so too must the SOF PME education. Some SOF PME programs are tailored to shift with changing TTPs and stay current as their sole purpose of operation. The only quantifiable education benefit (measured in dollars) that can be drawn from these alternatives is to the individual MARSOC Officer upon choosing the NPS DA alternative. That choice will earn the officer an increase in salary upon entering the civilian workforce, though studies on how much that increase is due to a Master of Science Degree in Defense Analysis could not be found. For all other alternatives, the benefits of SOF PME are qualitative in nature. According to a report published in April, 2011, NAVSPECWARCOM concluded that its officers gain a high quality graduate degree from the NPS DA program. It can be concluded that all SOF PME is deemed important to SOF personnel, though the quality of each increases the more in depth that education is given.

⁴³ Capt J. Chavez, personal communication, November 28, 2011

⁴⁴ Dr. Kalev Sepp, Senior Lecturer NPS DA Program, personal communication, August 15, 2011

	Structure Benefits	Award Upon Completion	Benefit of Completion
JSOU	Very Flexible, quick time completion	Certificate	Baseline established for SOCOM staff assignments
MARSOC TLC	Structured, short course	Certificate, transferrable graduate course credit	Advanced understanding of SOF environment
NSW PLC	Structured, short course	Certificate	Intermediate understanding of SOF environment. Inter-service training.
NPS DA	Very structured, dedicated study	Master of Science Degree	Advanced understanding of SOF environment. Can work across services and agencies.

Table 5. Education Benefits

As can be seen by Table 5, the required certifications to fill SOCOM joint staff billets are met by all alternatives the benefits associated with each differ greatly. The MARSOC TLC and NSW PLC course both offer similar benefits, as they are both hands-on and tailored specifically to joint special operations. The added benefit provided from the NSW PLC is the cross-service education gained; however, it is limited by the low amount of Marines able to gain access to this program. JSOU also offers similar benefits to the NSW PLC because the MARSOC Marines are better qualified to fill SOCOM staff billets. JSOU's added benefit is that it has exceptional flexibility in schedule and does not require a lot of time for completion of each segment. JSOU offers many courses per year in many different locations, which makes it the most flexible, as well as easiest to complete for a Marine Officer with an exceedingly high OPTEMPO. The number one benefit of the NPS DA program is the versatility of the Marine Officer that graduates with a recognized Master of Science Degree. The Marine can fill not only SOCOM staff billets but can also work with interagency and international SOF organizations. The benefits of the structure of the NPS DA program tend to be contradictory in structure to JSOU. The NPS Defense Analysis program is very structured and requires residence for 18 months with full time dedication of the Marine Officer. Although JSOU and NPS DA program structures differ greatly, they both produce qualitative benefits to the graduate. Specifically with respect to the NPS DA Program, Officers will be awarded a Master's of

Science Degree in Defense Analysis in either Special Operations or Irregular Warfare curricula by a fully accredited school.

C. OPERATIONAL TIME

1. Operational Time Costs

When JSOU created its courses, one of the main concerns was the ability to educate special operators while maintaining a high OPTEMPO. This is the reason for the short course length and flexibility of JSOU. This same high OPTEMPO is a main reason for MARSOC Officers' inability to find and attend additional SOF PME aside from what is already offered in the individual Marine's workup/pre-deployment cycle. Without question, the highest operational time cost belongs to the NPS DA program with its 18 month requirement for completion. The following chart demonstrates all time requirements for the alternatives by the number of days required to complete the recommended course of instruction. As seen in Figure 3, JSOU's Department of Operational Studies complete course fulfillment requires three months, as does the proposed MARSOC TLC. Finally, the NPS DA program shows the largest portion of time with its 18-month requirement.

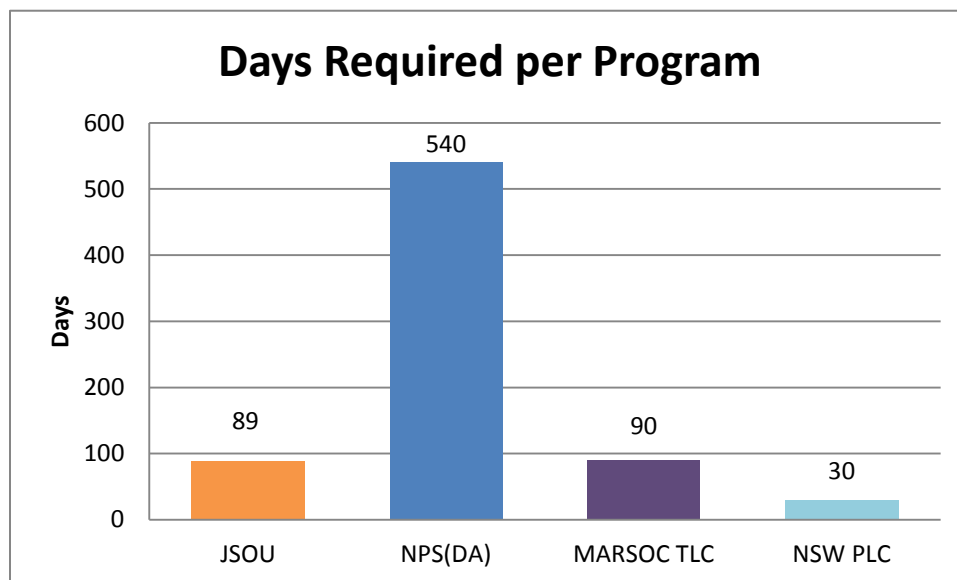


Figure 3. Time Costs per Alternative

2. Operational Time Benefits

There are no quantitative benefits for operational time. Qualitatively, however, the ability to attend training while not being absent from an operational unit for an extended period of time is weighed as an Operational Time Benefit. This applies to alternatives that do not require the MARSOC Officer to PCS to complete the training. Conversely, for all alternatives that do not require an alternative, that MARSOC Officer is actually absent from the unit no matter the duration of time, whereas an Officer that affects a PCS move is removed from the unit and immediately replaced. This offers a lower Operational Time cost to that unit who replaced him and is seen as an even greater benefit for this CBA. Operationally, all alternatives, with the exception of the NSW TLC, last for more than two months, which would count as an operational time cost qualitatively.

To the MARSOC Officer, if timed well, any of the extended alternatives serves as an operational time benefit. Often times, when a unit comes back from a deployment, it will spread its members for individual training. During this time, the Team Leader has the most freedom to seek individual education and PME. If the officer chooses one of these alternatives during this perceived “down time” post-deployment, it serves to be an operational time benefit. This is true for all alternatives with the exception of the NPS DA program, which requires a PCS move for the MARSOC Officer. That alternative will be discussed further in quality of life.

E. QUALITY OF LIFE

1. Quality of Life Costs

Most of the quality of life measures cannot be monetized or valued quantitatively. Qualitatively there are several factors contributing to quality of life regarding the available alternatives.

a. Cost of Living

Cost of living for a MARSOC Officer, married or single will increase when choosing an alternative involving TDY. When on a temporary status with no ability to save by living in bulk, there is an increase in spending. How much that spending increases in a matter of geography.

Location matters a great deal when determining a localized cost of living. San Diego and Monterey California have higher costs of living relative to Fort Bragg and Camp Lejeune, North Carolina, and Tampa, Florida (MacDill AFB). So while an officer may be stationed in Lejeune, North Carolina and his spending increases while attending a JSOU course in Fort Bragg, North Carolina, that spending amount is still likely to be less than a MARSOC Officer stationed in Camp Pendleton, San Diego who then goes on a TAD trip to Coronado, California for the NSW PLC. Those factors annotated, it is not possible to ascertain whether a MARSOC Officer is likely to spend more on a daily basis while on PCS orders to Monterey than he would if he were stationed in another base attending the other alternatives on a TDY basis.

b. Cost of High OPTEMPO

With the country passing the ten year mark of war, there are few Marine Officers that have still not seen combat deployment. On the other end of the spectrum, the officer types often most associated with MARSOC have not only deployments on record from before their time at MARSOC, but several of them have multiple MARSOC deployments as well. This high OPTEMPO is always a concern for all services as quadrennial quality of life surveys are closely monitored. The cost of this high OPTEMPO is a reduction in officer retention. While many of the alternatives are in conjunction with staying in an operational unit, the exception to this is the NPS DA program which forces a PCS move for 18 months.

c. Cost of Family Separation

The timeline for individual training for MARSOC Officers is usually post-deployment. Due to this fact, they are not often choosing training programs that keep

them from their families even longer. If forced to go, this too will have an adverse effect on retention. Given the different alternatives, the best option would be the NPS DA program which excels in family quality of life above all other alternatives. For the shorter alternatives, the NSW PLC would be the best option as it is only a month long. Lastly would be the JSOU and MARSOC TLC courses as they last three months, both unaccompanied from family.

d. Cost of Non-Operational Status

As all alternatives expect the MARSOC Officer to have previous deployments before arriving at the different commands, this non-operational status should have the smallest effect of all factors. Even the NPS DA program, which requires 18 months away from an operational unit, has been found to only enhance the officer's career post-graduation. No quantifiable information could be found on this topic specifically as can be found in other departments that already have Marine Officers with established careers post-graduation.

2. Quality of Life Benefits

MARSOC Officers coming off a deployment stand to increase their quality of life by taking 18-month orders to Monterey, California for the NPS DA Alternative. Assessing quantitative information that can be tied to this CBA's unit of measure is not possible, but the values can still be quantified by accessing several quality of life surveys for the United States.

A 2010 survey conducted by USA Today listed several U.S. cities on quality of life. Factors included emotional health (a key factor for military personnel with multiple deployments to consider), work experience, physical health, healthy behaviors, and basic access. With several of those amenities accessible even when living in a city in close proximity, this CBA took the overall rank of the closest major metropolitan area and applied it to the locations of alternatives. Table 6 shows the location(s) of the alternative,

the closest ranked metropolitan area, the mental health ranking, physical health ranking, the overall ranking from the survey, and the ranking amongst the other alternatives.⁴⁵

ALTERNATIVE	CLOSEST METRO	MENTAL HEALTH	PHYSICAL HEALTH	OVERALL RANK	ALTERNATIVE RANK
JSOU	Tampa, FL	114	130	132	3
MARSOC TLC	Monterey, CA	123	10	83	2
NSW PLC	San Diego, CA	40	15	42	1
NPS DA	Monterey, CA	123	10	83	2

Table 6. Quality of Life Ranking of Alternatives⁴⁶

F. SPECIAL OPERATIONS COMMAND

1. SOCOM Costs

Special Operations Command will not incur any additional costs with the selection of any of the alternatives with the exception of JSOU. JSOU is a direct reporting unit to SOCOM, hence, funding for JSOU comes directly from SOCOM. Even though SOCOM funds JSOU, the financial impact of additional such a small number of additional students to an already existing program is assessed to be negligible.

2. SOCOM Benefits

During a time when filling SOTFs and CJSOTFs demand IAs in order to fill all the staffing required, having better more well-rounded Marine Officers to fill some of those billets is a benefit to SOCOM. Depending on the level of SOF PME instruction will determine how much of a benefit to SOCOM it is.

⁴⁵ Susan Page, U. T. (2010, February 2). *Western Cities Fair Best in Well-Being Index*.

⁴⁶ Susan Page, U. T. (2010, February 2). *Western Cities Fair Best in Well-Being Index*.

VI. PREDICTING LONG-TERM IMPACTS

Step four of a cost-benefit analysis is to quantify all impacts for each alternative in each time period (i.e. over the life of the project). Direct cost categories such as housing and schooling costs are measured in dollars. These were defined in Chapter V and further evaluated in the monetized impacts chapter. The indirect and/or qualitative benefits to SOCOM as well as the benefits to the individual Marine and the Marine Corps cannot be measured in dollars and will not be addressed again until the recommendations section.

Overall, the alternatives of this CBA hold constant relationships with respect to costs and benefits. That is, we do not foresee any spikes in any costs in any alternative that would change the ratio to the benefits of the same alternative.

A. CURRENT MARSOC OFFICER SOF TRAINING

The quantitative impacts of MARSOC continuing to educate its Officers through current methods cannot be measured. The current curriculum for SOF PME is in a constant state of flux and continues to grow each year. That being said, it can be concluded that at current pace, MARSOC will eventually spend more for its SOF PME than several of the alternatives in this CBA. Furthermore, it should be noted that the current SOF PME given to MARSOC Officers is not accredited nor set against any specific unit of measure. This is more the case with private security firms that come to train Marine Special Operations Teams. These companies are usually staffed with former Special Forces and Special Operations personnel that have retired or left the military before retirement. After this crossover point is reached, MARSOC will pay more for unaccredited training than it would by sending its Officers to receive a fully accredited Master of Science Degree in Special Operations and/or Irregular Warfare.

B. JOINT SPECIAL OPERATIONS UNIVERSITY

The Joint Special Operations University offers courses in two disciplines or curriculums: the Department of Strategic Studies and the Department of Operational Studies. For this CBA, only the Department of Operational Studies was analyzed due to the Strategic Department's focus on the Senior Officer Corps. Courses vary in length depending on the depth required to complete. Completing the Operational Studies course takes 89.5 days. JSOU courses are offered in multiple locations depending on both the course to be taught and the needs of the class participants. With limited time due to high OPTEMPO, an MARSOC Officer has the ability to attend only a few classes at a time of relatively short duration giving at least some increase in SOF PME.

C. MARSOC TEAM LEADER COURSE

The MARSOC Team Leader Course has the potential to grow as large as the Naval Postgraduate School has room for. With the ability to easily select from the vast course offerings already established in the Defense Analysis program, the MARSOC TLC can be tailored to fit the Officers' needs based on shifting geographic locations, time already involved in SOCOM, etc. This will be addressed further in the recommendations section.

D. NSW PLATOON LEADER'S COURSE

The NSW Platoon Leader's Course has one major drawback for MARSOC Officers looking to gain SOF PME: it's a course intended for SEALs. In other words, because the course was created by and for Naval Special Warfare Personnel, they will never shape their course based on the inclusion of MARSOC Officers, they will never shift the timeline as needed to include more MARSOC Officers, and they in general will not accept change requests from Marine Officers on how the course could be better suited for Marines. MARSOC Officers do have a positive impact on the course, however. Often times, the Marines' ability to integrate fires makes for better inclusion in sidebar

discussions and individual training time.⁴⁷ Additionally, this alternative offers a chance for both MARSOC Officers and SEALs to integrate with each other in a learning environment which helps create seamless integration in a combat environment.

E. NAVAL POSTGRADUATE SCHOOL (DEFENSE ANALYSIS) CURRICULUM

In April, 2011, the Naval Special Warfare Command conducted a thorough review of the NPS DA program in order to:

1. Better understand the history, current curriculum, and value of the curriculum offered by the Naval Postgraduate School Department of Defense Analysis.
2. Recommend improvements, which will help prepare Naval Special Warfare (NSW) personnel to develop as SOF professionals and posture the NSW Force for success.⁴⁸

The result of the review was positive enough to cause NSW to double its quota of officers attending the NPS DA program. It can be then noted that any SOCOM organization participating in the NPS DA program stands to gain more than it loses in sending its Officers to the NPS DA program.

⁴⁷ Capt J. Chavez, personal communication, November 28, 2011

⁴⁸ Naval Special Warfare Command (2011). *Naval Postgraduate School Department of Defense Analysis Review*. San Diego: NAVSPECWARCOM.

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VII. MONETIZED IMPACTS

The fifth step of a CBA is to monetize each of the impacts identified in Step three.⁴⁹ The impacts to be monetized and totaled for each alternative are related to housing, education, and operational time commitments. As this was already analyzed by section in Chapter V, this CBA will monetize these impacts within their respective alternative. For each alternative, a total impact amount is given for both course completion as well as when housing costs are normalized over 18 months. This was done in order to conduct an assessment on overall value for the given alternative. As the NPS DA program had the longest time requirement of 18 months, all alternatives were normalized (with respect to housing costs) that length to match.

A. JSOU MONETIZED IMPACTS

JSOU has monetized impacts noted mostly from Chapter V. From those calculations, JSOU has a total cost of \$18,900 per course completion and \$44,820 normalized over 18 months.

B. MARSOC TLC MONETIZED IMPACTS

MARSOC TLC has monetized impacts similar to JSOU as well as a similar time requirement. The TLC has a total cost of \$16,560 per course completion and \$42,660 normalized over 18 months.

C. NSW PLC MONETIZED IMPACTS

The Platoon Leader Course has monetized impacts similar to alternatives 1 and 2, with the exception of a shorter time requirement. The PLC has a total cost of \$7,860 per course completion and \$37,440 normalized over 18 months.

⁴⁹ Boardman, Anthony et al. *Cost-Benefit Analysis: Concepts and Practice*. Third Edition. New Jersey: Prentice Hall, 2006.

D. NPS DA MONETIZED IMPACTS

The DA program has monetized impacts that are not like any other alternative. Due to this alternative requiring the Marine Officer to completely detach from his operational unit, the housing costs only require BAH as opposed to BAH plus per diem. Additionally, it has the largest time requirement of all alternatives at 18 months. This alternative has a total cost of \$48,060 per course completion, but \$31,320 of that total is the weighted average of BAH the USMC would be paying anyway. This leaves \$16, 740 as the additional cost of attending NPS.

The next step of a CBA is to discount benefits and costs to obtain present values. However, because this CBA is analyzing alternatives that are relatively short in duration, discounting over a long period of time is unnecessary and will not be addressed.⁵⁰

⁵⁰ Boardman, Anthony et al. *Cost-Benefit Analysis: Concepts and Practice*. Third Edition. New Jersey: Prentice Hall, 2006.

VIII. NET PRESENT VALUE OF EACH ALTERNATIVE

Step six of this CBA requires the analyst to compute the net present value (NPV) of each alternative. NPV is computed by taking the summation of all costs and subtracting them from the summation of all benefits. For this CBA, the monetary NPV is key to determining the best possible alternative in the conclusions and recommendations. Although they are not completely representative of every single factor of the alternatives, it is still an essential portion of the value overall.

A. ALTERNATIVE 1: JOINT SPECIAL OPERATIONS UNIVERSITY

Present Value Cost: \$18,900 Present Value Benefit: 0
NPV: \$(18,900)

B. ALTERNATIVE 2: MARSOC TEAM LEADER COURSE

Present Value Cost: \$16,560 Present Value Benefit: 0
NPV: \$(16,560)

C. ALTERNATIVE 3: NAVAL SPECIAL WARFARE PLATOON LEADER COURSE

Present Value Cost: \$7,860 Present Value Benefit: 0
NPV: \$(7,860)

D. ALTERNATIVE 4: NAVAL POSTGRADUATE SCHOOL DEPARTMENT OF DEFENSE ANALYSIS

Present Value Cost: \$16,740 Present Value Benefit: 0
NPV: \$(16,740)

The next step in a typical CBA is to do sensitivity analysis. As these costs and benefits have a standardized formula for calculation involving (most often) DoD wide values for housing and basic pay, a sensitivity analysis is not warranted for this CBA and will not be addressed.

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IX. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The final step of this CBA requires the analyst to make a recommendation based on the NPV and other costs/benefits of all the alternatives. Boardman (2006) recommends that the analyst adopt the alternative with the highest NPV.⁵¹ This CBA analyzed the quantifiable impacts of housing, and education. With those factors, Alternative 1 (JSOU) had a NPV of (18,900). Alternative 2 (MARSOC TLC) had a NPV of (16,560). Alternative 3 (NSW PLC) had a NPV of (7,860). Alternative 4 (NPS DA) had a NPV of (16,740). This, however, was not the whole value for each alternative as there were several qualitative impacts measured as well in this CBA. Those factors were operational time, quality of life, quality of award received for completion, and the benefits drawn from completion of the given alternative. Additionally, some of the costs derived don't tell the full story about the alternative either. These will all be addressed here.

Qualitative information plays a large role in final decision making for alternatives. For example, depending on how decision makers weight qualitative measurements, they could choose a more costly alternative if they deem the qualitative benefits outweigh the monetary costs.

Of the four alternatives noted below, this CBA used the status quo as an alternative, but it was addressed and treated as the baseline. Due to no specific SOF PME program that could be defined, a NPV could not be established. This is not to say MARSOC Officers do not currently engage in SOF PME, only that it is the baseline to work from for this CBA.

⁵¹Boardman, Anthony et al. *Cost-Benefit Analysis: Concepts and Practice*. Third Edition. New Jersey: Prentice Hall, 2006.

1. Alternative One – Joint Special Operations University

Alternative one involves sending MARSOC Officers to JSOU to complete the Department of Operations Studies curriculum.

- JSOU has the most flexible schedule

Of all the alternatives, JSOU is the only alternative that allows the MARSOC Officer to start the course and finish only when he has the time to complete another. With a lack of degree involved, there is also no statute of limitations for timeline to complete.

2. Alternative Two – MARSOC Team Leader Course

This alternative involves sending a select group of MARSOC Officers to NPS for one quarter to engage in SOF PME, taking one full course with regular students and getting a summarized version of several other courses during that time frame.

- The TLC offers the second best quality for SOF PME

If MARSOC is not able to send all of its officers through the DA program, the next best alternative is to set up the MARSOC TLC as designed in this CBA and execute that plan. While the course has the negative aspect of paying the officer both BAH from his duty station as well as per diem while attending the TLC at NPS, the quality of education is higher than any other alternative.

- MARSOC TLC has one of the worst family life options

If officers were made to come to NPS without their families it is the worst alternative for family quality of life (or internal quality of life). Although JSOU is roughly the same amount of time, it offers greater flexibility in its schedule allowing the officer time to spend with his family before returning for the next course.

- When timed correctly, MARSOC TLC is the best value option

The poor quality of life noted above only applies to a MARSOC Officer that is just home from deployment and with dependents. If that same officer is given this alternative at a different time however, on his way to his next duty station within

SOCOM perhaps, this becomes the best alternative if he does not have a full 18 months to get the NPS Master of Science in DA.

3. Alternative Three – NSW Platoon Leader Course

- The PLC offers the shortest path to attaining SOF PME

If time constraint is the number one focus, but the MARSOC Officer does not want to continually pay for flying back and forth from JSOU courses, then going to the NSW PLC is the best option for going straight to the course, taking the shortest amount of time possible, and getting back to the operational unit.

- NSW PLC is the best quality of life option externally

Externally San Diego was the best alternative for quality of life. It ranks high among alternatives for internal quality of life as well because the officer will only be away from his family for one month.

4. Alternative Four – NPS Defense Analysis Course

- NPS DA is the best overall alternative

With normalized cost being the lowest amount for any alternative while being matched with the best quality of education, NPS DA is the overall best choice.

- NPS DA is the best quality of life option internally

With all other alternatives, the MARSOC Officer must leave his family to attend training. In this alternative, he takes his family with him. Moreover, the officer is not separated from his family while earning his Masters with operational deployments lasting several months. Additionally, NPS DA ranks second for external quality of life as well so one does not cancel out the other.

B. RECOMMENDATIONS

Two recommendations will be made for this CBA. First, a choice based solely on cost will be given to show the strengths of choosing this alternative. This factor plays

heavily under times of budget constraint and can be a lead determinant. Second, best value will be given and analyzed. This choice represents the NPV as well as taking into the account the qualitative measurements to show overall value of the alternative.

1. Cost – NSW PLC is the Least Expensive Option.

If the amount of money spent is the only concern for MARSOC, the NSW PLC is the least expensive option. However, space is extremely limited and this course will continue to only be available on an audit or available basis. Additionally, it is not an accredited course, nor is the quality of education high due to such a short amount of time dedicated to learning.

2. Value - MARSOC Should Begin Sending its Marine Officers to the NPS DA Program

If MARSOC's greatest concern is the highest quality SOF PME while saving as much money as possible, then NPS DA is the best overall option. Not only does the DA program offer the most in depth analysis of all courses offered, but it also is based on an entire PCS move requiring less money to be paid for this top education.

C. RECOMMENDATIONS FOR FOLLOW ON STUDY

This CBA analyzing several alternatives with respect to MARSOC Officers and SOF PME generated several issues which require more analysis if these findings are not satisfactory. Among the findings presented, more concrete information would more than likely only confirm this analysis.

- A study should be conducted to compare the retention rate for the Marine Corps, MARSOC, and NPS Graduates. The ability of achieving a Master's Degree may increase retention in MARSOC and the Marine Corps overall, as it has in other programs at NPS.
- A study to determine the promotion rates of NPS graduates versus their non-NPS counterparts in the Navy, Army, Air Force and Marine Corps. It would be worthwhile to determine whether there is any statistical relationship between the promotion rates of officers with degrees from NPS and those who do not. This

would be vital to determining the worth of the Master of Science Degree in Defense Analysis as it would be difficult to assign a dollar value to such a degree.

- Another study should be conducted to find a way to monetize education benefits of various programs. Aside from monetizing the benefits of a Master of Science Degree in Defense Analysis, the other alternatives should have a value added for their education certification as well.

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APPENDIX A. REVIEW OF DEFENSE ANALYSIS CURRICULUM



DEPARTMENT OF THE NAVY
NAVAL SPECIAL WARFARE COMMAND
2000 TRIDENT WAY
SAN DIEGO, CALIFORNIA 92155-5599

1000
Ser 00/0377
29 Apr 11

From: Commander, Naval Special Warfare Command
To: President, Naval Postgraduate School

Subj: REVIEW OF NAVAL POSTGRADUATE SCHOOL DEPARTMENT OF DEFENSE
ANALYSIS CURRICULUM

Encl: (1) Naval Special Warfare Command Postgraduate School
Department of Defense Analysis Review

1. Commander, Naval Special Warfare Command conducted a thorough review of the curriculum for the Naval Postgraduate School's Department of Defense Analysis graduate program in Special Operations and Irregular Warfare.

2. Enclosure (1) report is a summary of findings and recommendations. It is forwarded for your review and approval.


E. G. WINTERS

Copy to:
USSOCOM (J7/9)

Naval Special Warfare Command



Naval Postgraduate School Department of Defense Analysis Review
(Special Operations and Irregular Warfare Graduate Degree Program)

22 April 2011

Enclosure (1)

Executive Summary

This review of the Naval Postgraduate School (NPS) Defense Analysis (DA) Department's Information Operations (IO) and Special Operations (SO) curricula was conducted by a team from Naval Special Warfare (NSW), which included representatives from Naval Special Warfare Command's N3 and N5, the Center for SEAL and SWCC, and the NSW Center. Overall, this review left a positive impression on all; the DA Department offers high quality graduate degree programs in Special Operations and Irregular Warfare and strongly supports the NSW Professional Military Education (PME) program.

The curriculum review included: (1) formulation of the overall curriculum review process; (2) a visit to the NPS to meet with students and key leaders in the DA Department; (3) surveys of and interviews with former students; (4) key document review; and (5) a planning session with the U.S. Special Operations Command's (USSOCOM) J7/9 Directorate.

The review findings encompass three general areas: (1) the DA Department's Education Skill Requirements (ESR); (2) answers to the initial review questions identified by NSW, and; (3) development of specific recommendations and future focus. These were presented to VADM Daniel Oliver, Vice (Retired), NPS President, and Dr. Gordon McCormick and his staff by RADM Ed Winters, Commander, Naval Special Warfare Command, on 11 March 2011 at NPS.

The following recommendations are provided:

1. Make identified adjustments to the ESRs (Annex A).
2. Increase the number of SEAL officers attending at any one time from 9 to 15.
3. Assign a senior SEAL officer to NPS as a Fellow to provide a NAVSOF voice within the DA Department.
4. Prepare students en route to NPS by providing a better understanding of DA curricula, various Specialty Tracks available, current strategic NSW issues, and follow-on available assignments.
5. Improve communication between NSW students and the NSW community while they are enrolled at NPS. This will allow the students to remain abreast of important issues affecting the NSW community and give them visibility into follow-on tours.
6. Develop a more robust research-topic recommendation process between NSW students and Naval Special Warfare Command.
7. Develop an enlisted personnel undergraduate degree program at NPS, which will afford selected enlisted personnel an education path and a process to receive Direct Commissions.
8. Make available billets for qualified senior enlisted to attend NPS and receive a graduate degree through the Special Operations (SO) and Irregular Warfare (IW) curriculum.

9. Conduct academic symposiums important to NSW.
10. Add stability operations focus with inclusion of Joint Proponency Office (JPO) responsibilities of Military Information Support Operations (MISO), Civil Affairs (CA), and Security Force Assistance (SFA).



E. G. WINTERS

**Naval Postgraduate School Department of Defense Analysis Review
(Special Operations and Irregular Warfare Graduate Degree Program)**

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Naval Postgraduate School Department of Defense Analysis Review

Special Operations and Irregular Warfare Graduate Degree Program

Purpose

The purposes of this review were: (1) to better understand the history, current curriculum, and value of the curriculum offered by the Naval Postgraduate School Department of Defense Analysis and (2) recommend improvements which will help prepare Naval Special Warfare (NSW) personnel to develop as SOF professionals and posture the NSW Force for success.

This was accomplished by reviewing current curriculums and examining the impact these curriculums have had on SEAL officers. Recommendations were provided on how to improve NSW's working relationship with the Defense Analysis (DA) Department and with students that attend Naval Postgraduate School (NPS) from the NAVSOF community.

The methodology involved discussion with DA Department key staff and faculty, surveying current and past students, sharing ideas with the SOCOM J7/9 Directorate, and reviewing the current Education Skill Requirements (ESR) and USSOCOM-NPS Memorandum of Agreement (MOA) to better understand what is and isn't relevant to today's SOF environment.

Background

In November 2010, RADM Winters, Commander, Naval Special Warfare Command (NSWC), met with VADM Daniel Oliver (ret), President, Naval Postgraduate School (NPS), and RADM Stephen Loeffler (ret), Director of Program Development and Regional Security Education, NPS. Following this meeting, RADM Winters directed NSWC N5 to facilitate a collaborative effort to review the NPS DA curriculum, identify its benefits to NSW, and recommend areas for improvement.

There is a requirement to conduct biennial reviews. Prior to this review, the last NSWC Commander to visit NPS was RADM Kernan in January 2008, and the last formal review of the Defense Analysis curriculum was conducted in May 1995.

On 19 November 2010, an NSW review team, chaired by CAPT Rick Sisk (NSWC N5), outlined the process and proposed that the following questions be answered in the review:

1. What is the goal of the Naval Postgraduate School (NPS) Special Operations/Irregular Warfare curriculum to an individual? To the NSW Force?
2. Is the Special Operations/Irregular Warfare curriculum relevant to NSW? What do we recommend to add or subtract from the curriculum?
3. Where does the Special Operations/Irregular Warfare curriculum fit into NSW's overall education strategy to create problem solvers?
4. What are NPS, Joint Special Operations University (JSOU), and Naval War College (NWC) primary roles in educating our junior or mid-grade officers? Why attend NPS vice other graduate programs?
5. Should we increase our quotas at NPS?

6. What happens to our officers following graduation? Have they contributed to the NSW/SOF community because of Special Operations/Irregular Warfare (699) curriculum?
7. Is there value for the community in the NPS exportable/distributed learning programs? Stand alone courses? Degree programs?
8. Can we send our Enlisted to NPS? Can SEAL/SWCC CWOs attend?

Additional questions independent of NPS:

1. Is formal education a required component for an officer's career?
2. What benefits does NSW want to derive from formal military or civilian educational institutions?

These questions, reviewed and approved by RADM Winters, set the stage for a follow-on team visit to NPS.

Review

USSOCOM-NPS Memorandum of Agreement (MOA).

The purpose of the MOA is to describe the relationships between NPS and USSOCOM. It outlines responsibilities in order to:

- Provide unique, interdisciplinary professional military education and research for SOF and SOF-enabling personnel attending NPS.
- Advance analytically-based, special operations-relevant research opportunities for NPS students and faculty.
- Explore the latest technologies, concepts of operations, and human systems integration for SOF applications in a field environment.
- Evaluate the viability of new SOF technology concepts as solutions for identified current and future capability gaps, as well as provide a venue for mission and capability-based experimentation.

NAVSPECWARCOM responsibilities are to:

- Provide for NPS administrative/program resourcing support which includes, but is not limited to, funding for Navy, Marine Corps, Air Force, and Army Special Operations student thesis travel, a portion of faculty and program management pay, speaker support, course development, and limited faculty research, travel, or conference support. As USSOCOM's executive agent for resourcing the NPS annual administrative/program support funding, NAVSPECWARCOM is responsible for receiving the NPS annual funding request and submitting POM input to satisfy the validated requirement.
- Establish the Navy Special Operations annual student requirement (quota) to attend NPS, validate the requirement with USSOCOM, and work directly with Navy and USSOCOM personnel managers to provide the minimum allocated students, currently five per year.
- Provide potential research topics of interest for student theses twice each year, when called for by the JSOU Special Operations Research Manager and the SOF Chair at NPS.

Initial NPS Visit

On 5 January 2011, a joint NSW-USSOCOM team visited the NPS DA Department and received briefings on the following:

- Introduction to the Department of Defense Analysis
- Common Operational Research Environment (CORE) Lab Visit
- Student Discussions
- Faculty Discussion Forum
- Department Leadership Open Forum

Introduction to the Department of Defense Analysis

The genesis of a Special Operations (SO) Curriculum was a joint effort initiated at the NPS in 1992 between CAPT Roger Herbert, VADM Bill McCraven and Dr. Gordon McCormick. It was formally sponsored by SOCOM in 1994, then upgraded to academic Department-level (Department of Defense Analysis) in Spring 2001. The Information Operations Curriculum and IO Center of Excellence were added to the Department in 2005.

The SO/IW and IO curricula are 18-month programs, during which a student is required to complete 21 courses, a guest-speaker series, symposia and roundtables, and a special operations-related thesis. Additionally, while at NPS Navy and USMC students will complete JPME Level I. There are currently 11 SEAL Officers attending NPS: nine enrolled in the DA SO or IO curricula, one in Operations Research and one in the MBA program.

The **SO Curriculum** is divided into two parts—a core program and a range of seven specialty tracks. The core program consists of 11 classes that define the essential elements of the DA program. The seven specialty tracks include: Irregular Warfare, Terrorist Operations and Financing, Operations Analysis, Combat Systems, Financial Management, and C4I systems, and Information Operations. With the exception of Information Operations, each track confers a M.S. in Defense Analysis (w/ Specialty Track).

As of November 2010, the Master of Science in Defense Analysis has been conferred on 716 graduates, 81 of whom have been SEALs; 192 have been Special Forces soldiers. The Department of DA also has a large (118 student) international contingent representing 44 countries. In total, 150 students are presently enrolled in various phases of the DA curricula, a significant increase from the 30 students enrolled in 2002.

Other points made during the overview briefing included:

- The Department of Defense Analysis also provides instruction in the Platoon Leaders Course, which was developed by and is currently offered at the NSW Center.
- USASOC is sending enlisted personnel (Sergeants First Class and above) to NPS.
- The Army has selected and supported a candidate to become an instructor in the DA Department upon completion of an appropriate PhD program at another institution.

- Other universities may have programs analogous to the SO/IW curriculum but usually are centered on a single course and a single professor. Conversely, the NPS DA department focuses exclusively on special operations, with a multidisciplinary faculty carefully selected for their experience, research, and potential contributions to the field. As an indicator of the program's selectivity, staff has interviewed 60 candidates for a currently available faculty position, none of whom have met the stringent standards for selection.

CORE (Common Operational Research Environment)

Dr. Sean Everton, Director of Research, and COL Greg Wilson, SOF Chair and Dir Operations & Management, conducted the NSW's visit to the CORE Lab.

The Lab develops students' knowledge, skills, and abilities in visual analytics. Three visual analytic methodologies are emphasized in DA courses and research projects: geospatial analysis, temporal analysis, and relational analysis. The application of these methodologies, and the analytical software tools associated with them, enable students to collect, manage, and fuse data in order to create a more complete picture of the common operational environment.

The Lab offers a four-course sequence for the MS in Defense Analysis: Visual Analytics; Geographical and Temporal Dimensions of Dark Networks; Tracking and Disrupting Dark Networks; and Dynamic Social Network Analysis. All offer real-world application opportunities to track human activity on a global scale. Among those, the link and social network analyses were impressive and have already proven useful. The fusion of data, now being collected through "smartphones" deployed forward, is made possible through software provided by Palantir. Data can be collected and processed through both unclassified and classified sources.

NPS DA Student Discussion

The curriculum review team met with a cross-section of DA students, including 11 SEAL officers currently enrolled (75 USASOC students comprise most of the remaining US SOF contingent). Across the board the students responded that the DA curriculum is very relevant to current counter-terrorism and counterinsurgency operations. The professors are highly qualified, and the opportunity to socialize with US and foreign counterparts was seen as an important aspect of the NPS experience. Very few of the students had knowledge of the DA program before attending.

A common theme expressed by students was that they needed a break from recurring deployments and OPTEMPO, especially for those with dependents. Nonetheless, NSW NPS students still wish to maintain a relationship to their NSW professional community and are sometimes frustrated by a lack of communication and connection. This stands in contrast to the experience of USASOC students, who are in regular contact with their colleagues and are often visited by senior ARSOF officers. One SEAL student suggested that a local SIPRNET link for NAVSOF accounts could help maintain professional contact.

Faculty Discussion Forum

Several faculty members, including Dr. Freeman, Dr. Rothstein, Dr Arquilla, and Mr. Lober, provided an overview of core DA courses. This provided a sense of the Department's mission, its education strategy, and the faculty's approach to making their program relevant to both the SO/IW community and the intellectual growth of their students.

Aside from their normal academic duties, DA professors pay particular attention to easing the transition of SOF operators to the roles of graduate students. During the course of study, faculty note that their students become much more comfortable with ambiguity and intellectual rigor, attributes they believe are critical in shaping better officers, innovators, and decision makers. In that context, the DA faculty has been consistently impressed with the SEAL students' ability to adapt and excel.

Dr. Freeman reviewed three of his courses: *Deterrence*, which reviews how we influence others; *Terrorism*, which concentrates on understanding the dynamics, drivers of terrorism; and *Terrorist Financing*, which provides insight into sources and ties to organized crime.

Dr. Rothstein reviewed three of his courses: *History of Special Operations*, which emphasizes SO strategic coherence and success; *Psychological Warfare and Deception*; and *Public Diplomacy*, which students report is especially enlightening when international students contribute to the discussion.

Mr. Lober reviewed his course *Critical Thinking and Ethical Decision Making*. Designed to further one's ability to analyze, refute, and construct persuasive arguments, it also helps participants recognize ways in which fallacies and evasive/manipulative language are used to support or refute responses to ethical issues. This has been cited as one of the most popular and lively courses in the curriculum.

Dr. Aquila reviewed his course *Conflict in the Information Age*. It posits questions and concerns about the changing spectrum of conflict within the context of an unfolding information age. It considers the technologies that appear to be driving new developments in military strategy, doctrine and organization, as well as the disproportionate power of networked non-state actors to pose threats to traditional nation-states.

DA Leadership Open Forum

NPS requested that the curriculum review focus on two areas—the Core Skill Requirements (CSRs) and the Educational Skill Requirements (ESRs). These requirements shape the curriculum in the Defense Analysis Department and provide the basis for measuring its relevance and effectiveness. They also support the Special Operations Curriculum subspecialty code XX29P.

The CSRs state that "the SO/LIC subspecialty code will provide a command with an officer possessing a graduate level education in the organization and formulation of U.S. security policy, the development and execution of military strategy, global and comparative economic analysis, terrorism, forms of unconventional warfare, contingency operations, and joint and maritime strategic planning." Specifically, the subspecialty code will enable an officer to:

- Develop and maintain emergent action/crisis procedures for special operations forces in response to global terrorism, political violence, and other mid-level conflicts.
- Advise Naval Special Warfare Command and other special operation commands in matters regarding low intensity conflict including political violence terrorism, and mid-level conflicts.
- Develop and coordinate Joint and maritime special operations plans and procedures for special operations missions in support of national and military strategy.
- Develop and conduct training in special operations policy and planning as it relates to national defense and military power.

- Develop military strategy for the conduct of special operations/unconventional warfare and the formulation of policy and role of U.S. special operations forces.
- Provide current information and analysis concerning the character of third world civil-military relations and the consequences of potential military coups against established governments.

Each ESR was reviewed and the results can be found in Appendix A.

Additional Activities

19-20 January 2011 - NSW Group TEN representatives visited NPS to attend a CORE Lab symposium.

18 February 2011 - Dr. Czech (NSWC N34) surveyed former DA curriculum students with the following questions relevant to the current ESRs (results are reported in Annex B):

1. How confident are you that you can apply historical lessons and past operations of SOF to joint and combined?
2. How confident are you that you can explain the political, ethnic, and cultural dynamics that lead to the outbreak of war within or between modern states?
3. How confident are you in explaining the operational and organizational dynamics of terrorism, social revolution, and unconventional warfare?
4. How confident are you in linking the historical and contemporary lessons of special operations (US and International) to contemporary or emerging world events?
5. How confident are you in understanding of the use of military power short of war? Examples include deterrence, coercion, and "armed diplomacy" in crisis environments.
6. How confident are you in your understanding of regionally-based terrorism, insurgent, and communal conflict in Latin America, Asia, and the Middle East?
7. How confident are you that you understand and could apply new and emerging technologies (lethal and non-lethal) to special operations?
8. How confidently can you link the principles and implications of information warfare to special operations?
9. How confident are you in your understanding of the political dynamics in the proliferations of weapons of mass destruction (WMD) and SOF's approach to WMD counter-proliferation?
10. How confident are you that you can (or would be able to) use analytical tools to aid decision-making in SOF strategic or operational planning? Examples are modeling, simulations, and gaming.
11. To what extent have your education and experiences at NPS influenced your approach to your duties since graduation?
12. How probable is it that each of the following NPS experiences has positively affected your approach to your duties and professional life?

13. Based on my experiences since graduation, I would have chosen something other than the SO/IW program.

2 February 2011 - COL Guy Lemire (Army Senior SOF Chair Fellow) and Lt Col Ed Koharik (AF Senior SOF Chair Fellow) reviewed the ESRs and recommended that they be revised to address SOF requirements to work within the interagency environment. Inside Washington DC, at Combatant Commands and within US embassies overseas, SOF are increasingly challenged to work with US Government Departments and Agencies to devise initiatives that support US Government objectives.

3 March 2011 - Mr. Mike Walton, SOCOM J7/9, visited WARCOM to discuss ESR recommendations with N5. SOCOM's expectation of SOF education was the primary take away.

"SOF education further develops Operators so they have the ability to serve effectively in complex, asymmetric operational environments that demand in-depth regional expertise. Operators must also understand the myriad of defense, diplomacy and development activities that collectively shape the environment."

"For the future, the SOF education community must look beyond the CENTCOM-centric view—US owned battlespace that SOF/GPF operate within and negotiate among US/coalition—and develop a force with a sustained global presence operating "by-with-through" host nation forces. SOF must be adept within environments owned by host nations and conducting operations with host nation security forces and successful interactions with local/regional/global NGOs."

11 March 2011 – RADM Winters (CNSWC) visited NPS to discuss his recommendations with the DA Department staff and provide some research topics important to NSW.

Recommendations

1. Make recommended revisions to the ESRs in Annex A. Overall, the current ESRs are well-developed. Most of the recommendations reflect updating language to maintain relevancy in today's operational environment.
2. Increase the number of SEAL Officers attending DA curricula from 9 to 15 officers. This will further support the DA curricula, improve professionalism throughout the NSW community, and help in reducing pressure on the NSW Force. The Navy, SOF and DoD will be better served by preparing a NAVSOF force that is better able to handle the challenges occurring from today's threats. Additionally, as stated in a recent study by the RAND National Defense Research Institute, "Military studies generally show a positive retention effect from funded graduate education." This number should increase at the same rate that our senior Lieutenant year-groups increase.
3. Assign a senior SEAL Officer Fellow to NPS to provide a NAVSOF voice within the DA Department.
4. Prepare students prior to attending NPS to give them a better understanding of the DA curricula, various Specialty Tracks available, current strategic NSW issues, and follow-on tours available to them. The latter can be accomplished through reviewing strategic documents/statements with Naval Special Warfare Command N5.
5. Improve communication between enrolled NSW students and the NSW community, allowing them to remain abreast of important issues affecting their community while making them aware of possible follow-on tours. Follow-on tours should allow an officer to take on more strategic-level assignments and thereby hone the fundamentals acquired at NPS. At minimum, establish NAVSOF SIPR and NIPR connectivity for each NSW student.
6. Develop a more robust recommendation process for research topics that includes consultation between students and NAVSPECWARCOM. Expand the research topic beyond the NSW realm to DoD-wide, interagency, and global issues.
7. Develop an enlisted personnel undergraduate program at NPS that will provide selected enlisted personnel an education path and a process to receive direct commissions.
8. Make NPS student billets available to qualified senior enlisted personnel for the Special Operations (SO) and Irregular Warfare (IW) graduate degree program.
9. Become a leader in conducting academic symposia and seminars to help SOF/NSW personnel understand cultures within current and future areas of operation. As stated in the USSOCOM 2011 *Commander's Guidance*, "... we (SOF) will participate in academic symposia and seminars, and place SOF members in key positions in US Missions, and foreign military units and headquarters. ...in an ever more complex world, SOF's ability to understand the people and environments to which we deploy, in order to accurately predict the nuanced impact of our actions, will continue to define our force. Our deeper knowledge of micro-regional geography, history, languages, religions, cultures and traditions will continue to distinguish SOF from General Purpose Forces."
10. Add a Stability Operations focus with inclusion of Joint Proponency Office (JPO) responsibilities of Military Information Support Operations (MISO), Civil Affairs (CA), and Security Force Assistance (SFA).

Appendix A

Educational Skill Requirements (ESRs) Recommendations

1. Strategy and Policy. Graduates will develop an ability to think strategically, analyze past operations, and apply historical lessons to future joint and combined operations, in order to discern the relationship between a nation's political interests and goals and the ways military power may be used to achieve them. Fulfilled by completing the first of three Naval War College courses leading to Service Intermediate-level Professional Military Education (PME) and Phase I Joint PME credit." (Required only for USN and USMC students.)

Recommendations: In addition to "future joint and combined operations," include a whole-of-government and/or interagency aspect. "The goals and the ways military power may be used," should be restated to say "the goals and the ways military and other instruments of national power may be used."

2. The Dynamics of Inter-State and Intra-State Conflict. An understanding of the political, ethnic, and cultural dynamics that explain the outbreak of war between and within modern states. Particular attention should be given to the issues of intra-state conflict, unconventional forms of inter-state military rivalry, the integrated role of force and diplomacy in crisis management operations short of war, problems of escalation in a crisis environment, military alliance behavior, the dynamic differences between zero sum and nonzero sum conflicts, the special problems associated with suppressing and resolving zero sum engagements, military and nonmilitary approaches to conflict resolution. Students must have a close understanding of the prevailing analytical literature on these and related subjects and be able to apply this literature to a broad range of contemporary and historical cases.

Recommendations: The first sentence, "an understanding of the political, ethnic, and cultural dynamics," should include global and regional influences. This will align better with the SOCOM's *Strategic Appreciations*.

3. Terrorism, Social Revolution, and Unconventional Warfare. A detailed understanding of the problems of domestic and international terrorism, social revolution, and other forms of irregular conflict. Close attention must be given to problems of both threat and response. The student must have a close knowledge of the prominent contending theoretical perspectives on the problems of terrorism and social revolution, a detailed knowledge of the operational and organizational dynamics underlying each of these forms of conflict, and a strong working understanding of the ways in which these and similar forms of irregular conflict have been countered historically. Where appropriate, the courses designed to satisfy this requirement should survey the U.S. experience in irregular warfare as well as that of other states that have been prominently engaged in such actions in the past, such as Great Britain, France, Israel, and the former Soviet Union.

Recommendation: It appears this ESR is focused on Irregular Warfare in the broader sense, yet its title includes a tactic, a political phenomenon, and a subordinate warfare area. A recommended title is "Asymmetrical and Irregular Aspects of Warfare." Additionally, the countries mentioned in the final sentence are very European centric and focus on unilateral operations. Recommend a *by-with-through* aspect, which could include countries from the Pacific Rim (ex – Philippines) and South America (ex – Columbia), and Africa. Because of today's environment, this ESR must focus globally to capture the influences of conflict.

4. Historical and Comparative Perspectives on Special Operations. A close understanding of the historical use of special operations forces, to include how these and similar forces have been organized, trained, equipped, directed, and employed. Attention should be given not only to the U.S. experience but to other national experiences as well, such as those of Great Britain, Germany, Italy, and the former Soviet Union. Similarly, this examination should not be restricted to contemporary history alone, but should extend back into the historical record to examine the ways in which special operations and related forces have been employed creatively to support state objectives in the more distant past. Throughout this inquiry attention should be given to the contemporary lessons that can be drawn from historic experience.

Recommendations: Focus on additional European/NATO countries having SOF, and Canada and Australia. All of these have extensive experience in the Post Desert Storm and 9/11 environment. What we did in World War II and the various regions of the world are different from wars of the future. Also, recommend emphasis on the role of women in special operations, specifically their role in the OSS during WWII. Rationale is that the increased role of women in SOF is a high interest issue among SOCOM leaders (how women in SOF can increase mission effectiveness) and is its own Key Challenge Area in the SOF Operator 2020 initiative.

5. Special Operations Doctrine, Concepts, and Institutions. A detailed and conception understanding of the development of doctrine for special operations. Work in this area should focus, first, on the defining events and experiences that have stimulated doctrinal and institutional innovations in SO and, second, on the forms these innovations have taken. This examination should cover the period from the end of World War II through the post-Cold War era. These and related issues should be explored creatively in an effort to uncover the appropriate roles and missions and strengths and limitations of military power in the emerging multi-polar environment.

Recommendation: Extend the ESR to cover post 9/11 era. In the last sentence, use global security, vice multi-polar.

6. Crisis Management and the Contingent Use of Military Power. An understanding of the political role played by military power in operations short of war, the problem of military crisis management, and the contingent use of force in support of local U.S. policy objectives. Attention should be given to the "signaling" role that can be played by military force, the special problems of deterrence and coercion in a crisis environment, and the military consequences of deterrence failure. The student should have a close knowledge of the historical record of "armed diplomacy" throughout the post-war period. This should include knowledge of the individual cases of U.S. military intervention in the Third World, from Lebanon (1958) to Somalia (1993). Attention should be given to both the theoretical and empirical literature on these subjects to provide the student with an understanding of the special political and operational issues associated with operating in a crisis environment.

Recommendations: This ESR should be broadened to comparatively look at the contrast between involvement/non involvement of SOF, direct versus indirect approaches, and deterrence through US military power—to include SOF—and partner nation security force capacity building. "From Lebanon (1958) to Somalia (1993)," should be updated to include Bosnia. Additionally, our officers must understand that globalization, instantaneous communications and modern, technological information networks work for and against all actors.

7. Comparative Cases of and Responses to Regional Conflict. A close knowledge of historical and contemporary "small wars" and other forms of low intensity conflict in Latin America, Asia, and the Middle East. The courses that satisfy this requirement should examine the pertinent theoretical literature on political violence in the region in question, review the recent history of regionally-based terrorism, insurgency, and communal conflict, the regional and international implications of these conflicts, and any functional issues that are of particular interest or concern in the particular area under investigation, such as, the religious or communal sources of political violence or the relationship between narcotics and insurgency.

Recommendations: Need to anticipate global impact and apply global solutions. Include Africa in the list of regions, and change *international* to *transnational*." Also, somewhere between this ESR and ESR #3 should identify and analyze the transnational / global aspects of terrorist, criminal, and other adversarial networks.

8. Special Operations and the Revolution in Military Affairs. An understanding of the ways in which the proliferation of new and emerging technologies is changing the shape of modern warfare. An important aspect of this requirement is to examine the likely impact of these developments on the dynamics and characteristics of 21st century warfare within both the inter-state and intra-state arena. The student must have a working knowledge of the major technological developments and trends in this area (both lethal and non lethal) and their conflict implications.

Recommendations: Change title from *Special Operations and the Revolution in Military Affairs* to *Special Operation in the 21st Century*. Also, in addition to the implications of technology, SOF needs to better understand its technological requirements and strategy. How does SOF communicate its needs to the technology industry? A primary concern would be that SOF is unable to use today's technology to the fullest; how are we going to use it tomorrow at the rate that it's growing—Moore's Law. Recommend that the DA Department's Capability Based Experimentation (aka TNT), be a venue utilized by all students.

9. Special Operations and Information Warfare. An understanding of the likely and potential implications of information warfare on future special operations. An important aspect of this requirement is to examine the principles of information warfare and examine the ways in which SOF can contribute to U.S. information dominance on the 21st century battlefield. This examination should address the problem of information dominance at the inter-state and intra-state level of war.

Recommendation: Historically, we have seen that a dependence on technology cannot replace the human factor—satellites replacing human collection and interface. Recommend that the ESR cover the relationship between technology and the use of cultural awareness and human intelligence (HUMINT). Operations in Afghanistan and Iraq continue to demonstrate the vital need for HUMINT, open source information, and LREC are vital to success. Therefore, the implications for fusing social intelligence with technical intelligence should be included.

10. Weapons of Mass Destruction (WMD) Proliferation and Counter-proliferation. Students will have an understanding of the problem of WMD proliferation and counter-proliferation. Students may have a technical or operational perspective on WMD. The student must have an understanding of the political dynamics of WMD proliferation and an understanding of recent and possible future trends in these areas. Close attention should also be given to the problem of counter-proliferation

and the ways in which SOF might approach this task. Students having a technical focus should have a working knowledge of nuclear and non-nuclear WMD Technologies.

Recommendations: This ESR is limited in nature for SOF, and should also include: (1) transnational issues of trafficking in WMD materiel / components, humans, drugs, small arms, money,, goods, etc.; (2) black / gray markets, the cut-out financial fronts, and money laundering; and (3) avenues various criminal, terrorist, or other shadow networks collaborate, unite, and/or compete with each other to serve their goals.

11. Analytical Methods and Applications. Each student will receive grounding in analytical methods and their application to military modeling, simulations, and gaming. Close attention will be given to the ways in which such analytical techniques can be used as heuristic and decision-making tools for strategic and operational planning. Attention will be given to both historical and contemporary military applications with particular focus on the ways in which such techniques can be used to address issues of interest to the special operations community.

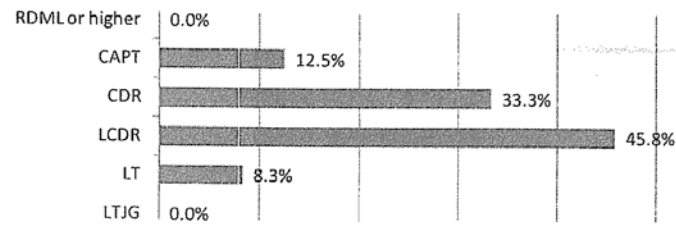
Recommendations: none.

12. Strategic and Operational Complexity. Special Operations (SO) is a style of warfare. No traditional single academic discipline can adequately address the educational requirements of the special operations community, so an interdisciplinary approach is required. Each student will develop a course of study that permits him or her to pursue a disciplinary orientation that best suits their particular academic background and interests within the substantive limits of the other ESRs.

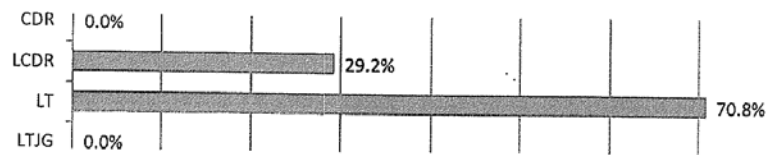
Recommendations: none.

Appendix B
NSW Survey Results

What is your current rank?		
LTJG	0.0%	0
LT	8.3%	2
LCDR	45.8%	11
CDR	33.3%	8
CAPT	12.5%	3
RDML or higher	0.0%	0
<i>answered question</i>		24



At what rank did you graduate from the SO/IW or SO/LIC program?		
LTJG	0.0%	0
LT	70.8%	17
LCDR	29.2%	7
CDR	0.0%	0
<i>answered question</i>		24



Graduates represented classes from 1994 to 2011, evenly distributed across those years (the largest subgroup was graduating class of 2000: 4 respondents)

How confident are you that you can (or would be able to) apply historical lessons and past operations of SOF to joint and combined operations in the future?		
Very confident	66.7%	16
Fairly confident	29.2%	7
Somewhat unsure	4.2%	1
Very unsure	0.0%	0
answered question		24

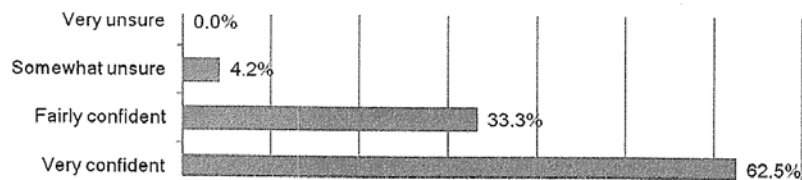
Was there anything specific in your classes or experience at NPS that influenced you in this subject?

- ALL of the courses I took at NPS were absolutely relevant to the current fight, and even though it has been 7 years + since I graduated, I still apply what I learned to my job.
- Directed study course(s). Case studies, political science methodology.
- The classes at NPS were broad based and exposed the student to many theories and ideas regarding IW. This gives the student multiple lenses with which to view IW depending on his particular circumstances.
- Excellent teachings by Gordon McCormick and John Arquilla.
- Many of the required readings and follow-on vignettes proved fruitful in reinforcing my memory of specific SOF missions since WWII. Several of the NPS SO/IW staff, many of whom are still teaching, were excellent facilitators of these lessons.
- The interaction with Army SF was a catalyst for ensuring we understood our history and their history better than they did. A few of the instructors are prior Army SF, so we did get a big helping of how great Army SF is, but by understanding their point of view we could better articulate how Navy SOF outperforms them or fills the gaps they are missing.
- However, I would say that's more because of my deployments than the classes I took.

How confident are you that you can explain the political, ethnic, and cultural dynamics that lead to the outbreak of war within or between modern states?

Very confident	62.5%	15
Fairly confident	33.3%	8
Somewhat unsure	4.2%	1
Very unsure	0.0%	0

answered question 24

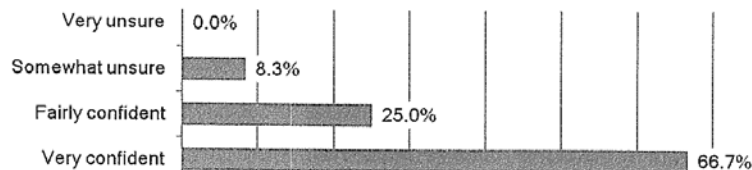


Was there anything specific in your classes or experience at NPS that influenced you in this subject?

- This question is poorly phrased. Modern states? Explain after the fact or before? If the answer is pre-war, then technically we would never be caught by surprise - which we seem to be quite often.
- Anna Simons' 'Anthropology of Conflict' course...probably the best class I have ever taken and I've always thought every SEAL should get a version of it.
- Anthropology course.
- Anna Simons class was exceptional
- Excellent instruction and material.
- We conducted studies/analysis on war that occurred during different time periods and different continents.
- I'd like to note that Prof. Anna Simons provided great insight into this particular subject matter. While arguably unique to the '97-'00 Seaman To Admiral, SO/LIC grad's, five of us walked away with enough info on this subject to have minor in Ethno-Nationalism and Anthropology - great for understanding how our allies and enemy tick.
- Many SMEs from various political backgrounds and agency backgrounds gives a well rounded education on the various aspects of war
- I would say I could explain them, but like in the case of Egypt, I don't think I could necessarily predict them.

How confident are you in explaining the operational and organizational dynamics of terrorism, social revolution, and unconventional warfare?

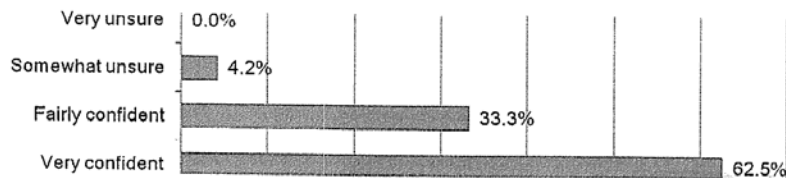
Very confident	66.7%	16
Fairly confident	25.0%	6
Somewhat unsure	8.3%	2
Very unsure	0.0%	0
answered question		24



Was there anything specific in your classes or experience at NPS that influenced you in this subject?

- All of Gordon McCormick's courses which covered these subjects...who can forget the 'mystic diamond?' Gordon was prescient and well ahead of the curve. What he talked about in 2003 is relevant today.
- Theories of revolution, applying case studies.
- Diverse classes, NPS was the first time in my career that I had the opportunity to meet and think deeply with other SOF Officers from every service. Having that depth of experience from so many different areas of SOF in the excellent setting at Monterey, with the excellent professors was the key to my confidence in this question.
- We each selected a specific revolution (I selected the Greek Revolution-WWII period) and conducted a book study and wrote a report. The lessons I learned on that project has stayed with me for 11 years.
- The SO/LIC chair, Prof. Gordon McCormick led the way on many of these courses. Another professor, Mr. David Tucker, taught several of these courses and was tougher for me to digest. But overall, I'm comfortable with this complex subject matter.
- The SO/LIC chair, Prof. Gordon McCormick led the way on many of these courses. Another professor, Mr. David Tucker, taught several of these courses and was tougher for me to digest. But overall, I'm comfortable with this complex subject matter.
- I would say SOLIC provided a solid foundation in the root elements

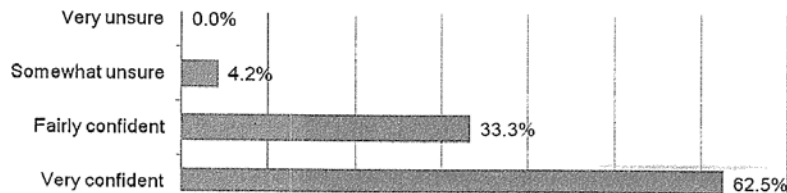
How confident are you in linking the historical and contemporary lessons of special operations (US and international) to contemporary or emerging world events?		
Very confident	62.5%	15
Fairly confident	33.3%	8
Somewhat unsure	4.2%	1
Very unsure	0.0%	0
answered question		24



Was there anything specific in your classes or experience at NPS that influenced you in this subject?

- Hy Rothstein's courses, George Lober's 'Critical Thinking and Ethical Decision Making,' and Anna Simons' 'Military Advisor' were outstanding and still relevant today.
- Having access to secure communications in the academic environment was a unique aspect that enabled me to not only achieve a PG degree, but also to keep tabs on current events. I was working on emerging world events in my thesis and able to not only have access to classified info that would not have been available at a civilian school, but also the opportunity to travel TDY to military commands and JIATFs to conduct research.
- Comprehensive understanding of the creation of SOCOM, the failure at Desert One, and the success and failures of foreign special operations
- We often looked at common themes that spanned many eras/periods.
- History repeats itself - and recent history, which is the root of much of today's turmoil, is fairly easy to link past to present by events, leaders, ethnicity, or religion.

How confident are you in linking the historical and contemporary lessons of special operations (US and international) to contemporary or emerging world events?		
Very confident	62.5%	15
Fairly confident	33.3%	8
Somewhat unsure	4.2%	1
Very unsure	0.0%	0
answered question		24

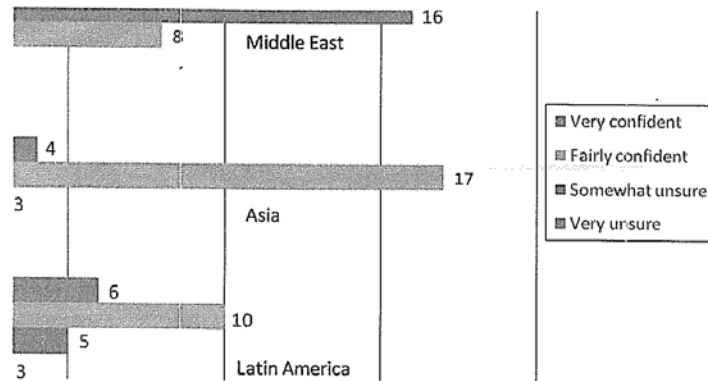


Was there anything specific in your classes or experience at NPS that influenced you in this subject?

- David Tucker's courses covered this...and I still remember it.
- Courses in deterrence / crisis management, studying sources of power (PEMISI)
- Very thorough curriculum and exposure to experts in the local area.
- The combination of JPME 1 courses provided at the same time as the brinkmanship NSA type courses coupled with the low intensity/special operations activities that can be conducted below the war threshold. Learning about these activities conducted in the past allow for a better understanding of the use of military power short of war.
- This was a subject specifically taught to me by Prof. David Tucker. While I got through this subject, his delivery and much of the course reading was dry. I understand the elements of each tool that's mentioned above, but am less confident with leading the implementation of it, especially appreciating the synergistic power of bringing multiple tools to bear in tandem IOT resolve/mitigate a particular crisis.
- They have a class titled "Deterrence" taught by an exceptionally well versed and qualified individual.

How confident are you in your understanding of regionally-based terrorism, insurgency, and communal conflict in the each of these world areas?

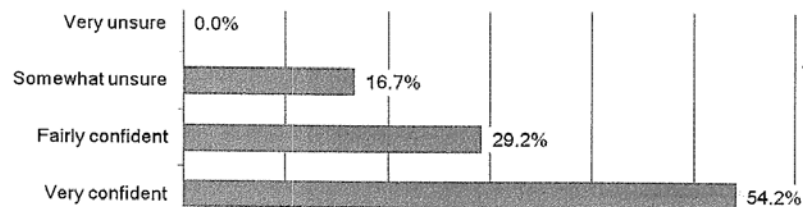
	Very confident	Fairly confident	Somewhat unsure	Very unsure	Response Count
Latin America	6	10	5	3	24
Asia	4	17	3	0	24
Middle East	16	8	0	0	24



How confident are you that you understand and could apply new and emerging technologies (lethal and non-lethal) to special operations?

Very confident	54.2%	13
Fairly confident	29.2%	7
Somewhat unsure	16.7%	4
Very unsure	0.0%	0

answered question 24



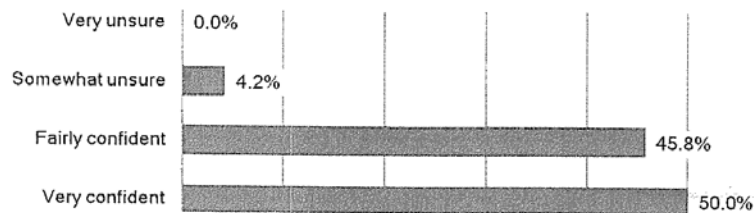
Was there anything specific in your classes or experience at NPS that influenced you in this subject?

- From my personal experience, the ability to create your own curriculum allowed me to pick a minor that let me delve into the tech component of SOF/IW.
- I was able to follow the information operations track of SOLIC which enabled me to choose classes outside the curricula in technical areas that interested me. It also afforded me the ability to get extra counseling from John Arquilla, a renowned expert in the area. His clearance and our clearances also allowed him to lecture us on classified capabilities that would have been unknown in a civilian environment.
- We could have used more course work in this area.
- I graduated NPS in 2000. Technology has advanced vastly since then, especially tools that can target/influence our adversaries. My thesis advisor, Dr. John Arquilla was, and still is at the cutting edge of this subject matter. Bottom line, much of my familiarity on this subject is from OJT in garrison and on deployment vs. NPS-taught. I'd speculate that the current curriculum does a much better job at laying out this subject matter for today's SO/IW students.

How confidently can you link the principles and implications of information warfare to special operations?

Very confident	50.0%	12
Fairly confident	45.8%	11
Somewhat unsure	4.2%	1
Very unsure	0.0%	0

answered question 24



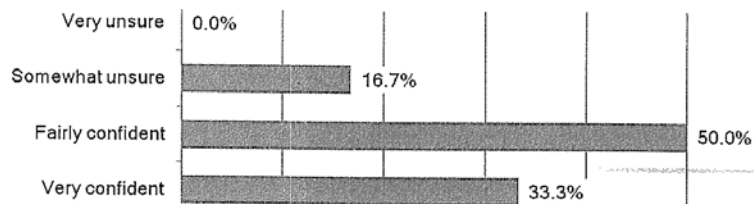
Was there anything specific in your classes or experience at NPS that influenced you in this subject?

- In addition to the Defense Analysis (SOLIC) program, I completed the Information Systems and Operations degree.
- I am personally very confident regarding the technical aspects of IO but less sure about the softer aspects of IO
- Much like my answer to the last question, my interest and ability to follow the information operations track gave me much greater insight into this area and were really the only time in my career that I had the opportunity to study this.
- More study in this area would have also been beneficial.
- Pardon the cliché, but as a SEAL, I'm more focused on the kinetic tools of our trade. While I appreciate the supporting, and sometimes leading role of IW and/or IO, I'm not as confident as a US Army IW/IO specialist at implementing these tasks/tools. I am confident, though, that I understand the elements of IW/IO and their positive impact to SpecOps
- Dr. Arquila discusses this in depth and they have a whole branch degree in IO.
- Due to OJT / Deployments

How confident are you in your understanding of the political dynamics in the proliferation of weapons of mass destruction (WMD) and SOF's approach to WMD counter-proliferation?

Very confident	33.3%	8
Fairly confident	50.0%	12
Somewhat unsure	16.7%	4
Very unsure	0.0%	0

answered question 24



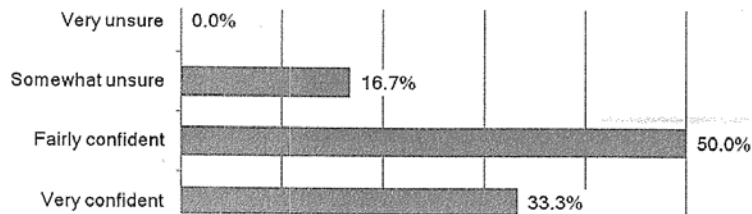
Was there anything specific in your classes or experience at NPS that influenced you in this subject?

- O'Connell's Nuke course laid an excellent background for the subject.
- NPS was the first place where I was able to be read into programs that allowed me to know topics in this subject.
- I understand the political dynamics behind WMD proliferation and SOF's approach to countering it. But, this is truly a niche mission for some of our more advanced SOF SMUs. NPS is largely an UNCLAS domain and can dance around the subject from a policy standpoint through vignettes. But this subject is tough to deeply dive into, unless one makes it their master's thesis topic.

How confident are you in your understanding of the political dynamics in the proliferation of weapons of mass destruction (WMD) and SOF's approach to WMD counter-proliferation?

Very confident	33.3%	8
Fairly confident	50.0%	12
Somewhat unsure	16.7%	4
Very unsure	0.0%	0

answered question 24



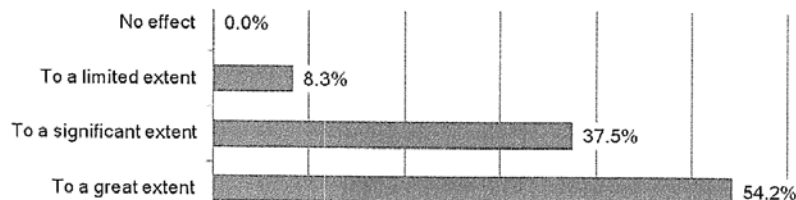
Was there anything specific in your classes or experience at NPS that influenced you in this subject?

- Frank Giordano had an excellent course on this; I would have to brush up to get current.
- With the exception of a single JAVA course I did not take any modeling classes
- The Math Modeling classes were very good, Professor Giordano created a very applicable 'operations research lite' sort of class that gave me enough experience to know how to apply the concepts or at least look up the right references.
- I can but don't know how much I would. I would be able but would limit the trust put into analytical tools except for the most strategic of planning or principle based questions to be answered. For straight forward operational needs such as staging, support, supply, manning, etc.. I believe I could use analytical tools and use them with confidence.
- I'm not a math guy - so I would not be a proficient action officer in this subject. I am now a JSO-qualified officer, but left NPS with only JPME-I and a couple of Org Design and Modeling courses. While I understand these tools are out there and could lead teams that could execute this skill, I did not delve into any modeling, sims, or gaming courseware that wasn't part of the baseline requirement for graduation.
- I was introduced to this, but consciously ignored it and stayed away from it.
- I'm good with gaming, but am somewhat skeptical about modeling and simulations

To what extent have your education and experiences at NPS influenced your approach to your duties since graduation?

To a great extent	54.2%	13
To a significant extent	37.5%	9
To a limited extent	8.3%	2
No effect	0.0%	0

answered question 24



Was there anything in your classes or experience at NPS that influenced you in your approach?

- NPS was not only a great professional education that absolutely influenced my world view and approach to modern conflict, but also exposed me to fellow SOF officers who I have ended up working with and running into several times since I have graduated.
- It provided a lexicon and language to view and discuss issues. In the 11 years since graduation I can tell an NSP ASD SOLIC graduate immediately because of the way he discusses and analyzes issues, refers to key authors or approaches a problem. This is significant because it baselines SOF's thinkers.
- The education I received in approaches to COIN, IW, and event my interaction with my fellow students (90% Army) greatly affected how I dealt with a COIN.
- The SOLIC program greatly helped me refine my analytical ability and have confidence in the quality of my knowledge base.
- We had a chance to look at military problems in an academic setting away from the normal military pressures (deadlines, task-saturation, etc) and that was extremely valuable.
- Several of my NSW-specific and joint tours after graduation were shored up by what I was taught at NPS...within my year-group peers, I was at a particular educational advantage. My peers had nowhere near the strategic picture or understanding I had over a variety of DIME and or SOF issues.
- My time at NPS taught me how to frame problems and analyze them in a systematic way. I have relied a lot on what I learned there to approach issues in the military and refine my leadership style.
- I have a greater understanding of SOF in the diplomatic world, a greater understanding of the interactions of SOCOM with D.C., and the relationship of the different SOF components.
- Gordon's constant mantra that "we don't teach you what to think, we teach you how to think." I was always skeptical but by the end I saw what he was saying and understood. Professors had VERY different styles and the entire experience was very educational with respect to all aspects of thinking and presenting ideas.

How probable is it that each of the following NPS experiences has positively affected your approach to your duties and professional life?

	Definitely	Very probably	Probably	Possibly	Probably not	Very probably not
Classes, lectures, and readings	19	3	2	0	0	0
Practical exercises and lab work	11	7	3	1	2	0
Thesis research and writing	13	4	2	4	1	0
Professional relationships with faculty	13	3	3	2	2	0
Professional relationships with other students	17	6	1	0	0	0
Social and informal relationships with other students	14	8	0	1	1	0

Complete the following statement: Based on my experiences since graduation, I would have chosen...

• a different focus within the SO/IW program.	4.2%	1
• another program within the Defense Analysis department.	4.2%	1
• a program at NPS, but outside the Defense Analysis department,	0.0%	0
• another graduate program at a different military institution.	4.2%	1
• a graduate program at a civilian college or university.	8.3%	2
• nothing different; I'm satisfied.	79.2%	19

answered question 24

Any comments for clarity or amplification?

- NPS was a fantastic experience, absolutely worthwhile, and should be attended if possible by all SEAL officers seeking to develop expertise in their profession.
- Extremely happy with my NPS education and its continuing applicability to my assignments
- I have an engineering BS, I sometimes wonder if I would have made better use of my time at NPS if I pursued an engineering MS or Operations Research. However, then I think that I would not have applied it realistically in my job as a SEAL leader and the knowledge would have gone to waste like my BS did. I am very satisfied with the SOLIC program and the quality of it and the faculty was wonderful. When I arrived at NPS, I was slated for a Systems Engineering Integration curriculum. Upon arrival I discovered that the curricula were new and not very well established. Luckily, Gordon McCormick took me in with no issues and I was able to have the flexibility to guide the curriculum in the areas that interested me, information operations. I am sure that lot's of guys benefit from other curricula that could be considered more rigorous or other civilian schools that have more prestige, but I have ZERO complaints about my time at NPS or the SOLIC program. I know that they are always on the chopping block and they never got much love from the senior leaders, but they will always have my support. The other great thing about NPS and the flexibility of the SOLIC program was that I was able to knock out JPME I while I was there. The only complaint I have is that I would have liked to stay there longer and maybe picked up a language. Thanks.
- Having joint officers(SF, Rangers, MISO, CA, NSW, AF) learning together was an exceptional experience and positively influenced the classes - discussions were informative and often spirited. In a post 9/11 world, this interaction with joint SOF is even more important as these guys will most likely work together on the modern battlefield (wherever that may be).
- My only criticism as a junior officer going through the SO/LIC program at the time was that the program was so myopically focused on "POLI-SCI w/ a SOF Military Spin" that it wouldn't be transferable to a civilian career field should I decide to separate once my obligated service was fulfilled, or upon retirement. One would almost assuredly be required to stay within DoD civil service upon retirement with this education. Consequently, I took night-school college classes while there for the diversity. In hindsight I wouldn't change anything. I just want the survey team aware this was a concern of mine.
- I would not change a thing, I thought the program was exceptional.
- Despite Defense Analysis being closer to my job in the military, I enjoyed the technical classes I took as electives a little more.
- All these options weren't available when I went through... we just had straight stick SOLIC as an option.

Appendix C

Initial Questions and Answers

1. What is the goal of the Naval Postgraduate School (NPS) Special Operations/Irregular Warfare curriculum to an individual? To the Force?

OPNAV Instruction 1520.23B (1991) states it well, that "the Navy offers graduate education to:

- Support requirements for officer with specific subspecialty skills
- Encourage professional knowledge and technical competence
- Provide recruitment and retention incentives
- Recognize aspirations of individuals

Further it states that education is a strategic investment in the future capabilities of the naval service and that education policies should develop a portfolio of skills and competencies necessary to execute Chief of Naval Operations guidance and maritime strategy."

NPS DA Department has built curricula which assist NSW in building a more professional force needed to deal with the complexities of threats in the world today and tomorrow, and enhance a SEAL Officer's ability to:

- Strategically develop judgments about the use of Special Operations
- Think more clearly, creatively, and analytically
- Avoid the pitfalls of "conventional wisdoms"
- Find and use evidence to advance an argument
- Employ a broad range of analytical and theoretical tools to improve operational effectiveness
- Innovate and adapt in the face of uncertainty

2. Is the Special Operations/Irregular Warfare curriculum relevant to NSW? What do we recommend to add or subtract from the curriculum?

Yes, it is relevant to NSW. These curricula continue to develop the critical and adaptive thinking of our Officers, as they are expected to lead in highly complex environments. As we venture more into more of a "prevent and deter" posture, our leaders will need to be able to operate with an understanding outside of the past kinetic venue. In the future we will need to be both warriors and diplomats, and be able to work with partner nations to grow their security force capabilities and capacities, even to the point of developing warrior diplomats from within the partner force. We need to better understand what does or will influence future conflict. What we learn in the future must focus more on the influences of global crime and extreme causes, and how to curtail their negative effects on the positive impact of economic growth throughout various regions. How we pose our messages strategically has become as important as how we kinetically cripple an enemy. As Admiral Olson states, we must UNDERSTAND before we COMMUNICATE, MOVE and REACT.

3. **Where does the Special Operations/Irregular Warfare curriculum fit into NSW's overall education strategy to create problem solvers?**

What is learned from these curriculums builds NSW's operational core understanding of Special Operations and irregular conflicts that exist throughout the world. Professionally, a large portion of NSW officers should be required to participate in these curriculums as part of their programmed development early in their careers. However, NSW needs to build an education strategy which creates an intellectually diverse Force, which includes other curriculums and postgraduate institutions—both foreign and US, in addition to the ones being reviewed in this report.

4. **What are NPS, JSOU, and NWC primary roles in educating our junior or mid-grade officers? Why attend NPS vice other graduate programs?**

NPS's mission is to "provide relevant and unique advanced education and research programs to increase the combat effectiveness of the U.S. and Allied armed forces, and to enhance the security of the United States" (NPS, 2005).

NPS by nature provides a broader and a more varied individualized experience for junior officers. JSOU provides education in terms of very specific curricula designed to impart basically the same level and amount of knowledge to each student for more basic knowledge needs. NWC is focus more on senior, Joint officer development.

5. **Should we increase our quotas at NPS?**

Yes, but the difficulty is that only 66% of our Lieutenant billets are currently manned. Ideally, a graduate degree should be part of all SEAL Officers' career paths, and we need to ensure we have intellectual diversity throughout the community. We currently send about 1/3 of a Lieutenant year-group (9-10 officers) to graduate education; seven of whom attend NPS. We are taking risk in our future by not completely developing professional officers across the force or the full spectrum of intellectual needs of our community. One way of looking at this is that we should be sending 50% of a Lieutenant's Year Group to NPS, 25% to other U.S. universities, and 25% to foreign universities. Of the 15—today's numbers—which should go annually to NPS, 10 should attend the DA curriculum. That would raise our numbers from 6 per year in the DA Department to 10. Because the program is 18 months long, at any one time NSW would have 15 students attending, vice the 9 currently. This number should increase at the same rate that our senior Lieutenant Year Groups increase.

Looking ahead, possibly years ahead to when NSW participation in OEF and OND is reduced and individual deployment tempo returns to pre-9/11 numbers this ideal should be attainable and increasing NSW billets should be revisited.

6. **What happens to our officers following graduation? Have they contributed to the NSW/SOF community because of Special Operations/Irregular Warfare curriculum?**

From what was measured in the surveys, officers that have attended the DA curriculums have gone on to have successful careers, and are filling key roles throughout the community. Then Commander Bill McRaven, who helped create the first curriculum, has just been selected for his fourth star and command of U.S. Special Operations Command.

7. **Is there value for the community in the NPS exportable/distributed learning programs? Stand alone courses? Degree programs?**

From interviewing students, past and present, there is more to be gained by attending NPS, vice distributed learning. Exportable training does not give you the interaction that is required to truly learn critical thinking and the subjects that are important for today's and tomorrow's fight. Distributed programs are more expensive and the quality of professor is not to the level that our officers deserve. Additionally, stepping out of the community and operational environment is important to reduce the pressure on the force and increase retention. However, the value for standalone courses is important to cover current, pertinent subjects as a continual learning process. They can also be tailored for specific needs, which will be important as the environments we operate in continue to morph, globally.

8. **Can we send our Enlisted to NPS? Can SEAL/SWCC CWOs attend? Yes, but they must still meet all the entry requirements.**

Yes, and we should. USASOC is already sending senior enlisted and Warrant Officers. Senior Enlisted who attend will be better prepared to take on position at Joint Staffs and at the Naval Special Warfare Command. Many NSW senior enlisted and Warrant Officers have degrees, or at least some level of undergraduate education. We rely now on senior enlisted and Warrant Officers for many of the qualities (judgment, critical thinking, creativity, etc.) that we see graduate education building in the officer corps. It just makes sense to continue to develop these qualities in all ranks of people we expect to demonstrate them.

9. **Is graduate education a required component for an officer's career?**

Yes. We must not risk NSW's future intellectual development for short-term gains. Additionally, studies have shown that officers with graduate level education promote at a higher rate than those without. "However, a large portion of the relationship between graduate education attainment and promotion is due to unobserved attributes that may lead more-promotable officer to attend or be selected for graduate school (Bowman and Mehay, 1999)."

10. **What benefits does NSW want to derive from formal military or civilian educational institutions?**

A Force that is prepared to lead in tomorrow's complex and ever changing political, economical, and technological environments. We must continue to educate our Force at the highest level to remain relevant in deterring and preventing future conflicts. We need educated critical thinkers capable of growing beyond the tactical level leadership they have been executing to operational and strategic thinking, defining the future of NSW and how it fits within SOF, within the Navy, and where the unique abilities of maritime and joint Special Operations Forces can best serve our national interest. Additionally, we recruit the best, and will only retain them through challenges and opportunities that they cannot gain elsewhere.

Appendix D

NPS Critique Summaries: Summer / Winter 2010

Summer

1. Increase interagency interaction throughout DA experience. Recommend – IA guest speakers, IA enrichment week – focused interagency seminar etc.
2. IW Campaign Design and Planning Course - the students have repeatedly expressed a desire for a capstone course. Status – course is in development and will start with a directed study in the Fall.
3. Thesis Proposal – students expressed a desire to have this approached as a directed study with their actual thesis advisor.
4. Students feel there is too much math... would like to see it condensed to two classes if possible.
5. 2 Year Program – with JPME many students would like to see the program expanded to 2 years... would allow for more electives (most also have the time on their clocks as majors).
6. Organizational Theory – students are not satisfied with the instruction! Would like to see more focus on military relevant organizational issues – coalition C2, cellular organizations, tribes etc.
7. Faculty Interaction – many students have not met the entire faculty. They would like to see bios and meet them early in a social setting. Recommend - 2nd QTR faculty student meet and greet and incorporate our faculty into guest speakers program.
8. Social Movement Theory – great reviews and would like to see following Gordon's class! Would like to see more UW relevant courses offered.
9. Class outside of DA – students would like to see a list of popular relevant classes being taught outside our department (NSA etc.) Recommend – we generate a list based on student input.
10. NATO or Coalition SSC or Fellow – students would like to see an international SOF officer on our faculty. Perhaps NSCC?
11. NAVSOF Expertise/SSC – missing this on the faculty....SEAL input.
12. Admin Support – very low marks for the student detachment. Recommend – they post admin folks here in Monterey or we tap into DLI resources.

Winter 2010

1. Tucker/Lober's espionage class is excellent.
2. Classroom size is getting too large.
3. Students would like to see more CORE options. For example, Doowan's Social Mobilization Course is always singled out...maybe an alternative to The Nation State...??
4. Students would like to see the shortened math course become the norm or at least an option (Section 1 and 2 done together; and recommend the 6-week Models of Conflict class).

5. Organizational Theory class came up again. Students think the material is awesome, but are not happy with the way it's taught. The students think it's completely disorganized and that they end up teaching themselves.
6. Students would like to see Wicked Problems and the Model of Conflict courses offered sooner as the material learned is useful in the thesis process. Both courses got high marks from the students.
7. Some gripes on the PSYOPS, Diplomacy and Deception course...the reading requirements are excessive. Took up 50% of their time each night...would like to have seen more lecture (Gunner's class).
8. Because of the costs of text books nowadays, students are appreciative of the readers that some professors have made. Also like the use of Blackboard (saves money too.)

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APPENDIX B. DEPARTMENT OF DEFENSE ANALYSIS MATRICES

Department of Defense Analysis

Degree: MS in Defense Analysis (Irregular Warfare)

QT1 Summer	QT 2 Fall	QT3 Winter	QT 4 Spring	QT 5 Summer	QT 6 Fall	Track Options
Seminar in Guerrilla Warfare (DA)	Organizational Design for Special Operations (DA)	History of Special Operations (DA)	Regional Seminar in Terrorism and Sub-State Conflict (1 of 5 Regions) (DA)	Critical Thinking and Ethical Decision-Making (DA)	ILE (NWC) —Or— Track Option (DA)	The Military Advisor Culture and Influence The Theory and Practice of Social Revolution
Deterrence, Compellence, & Crisis Management (DA)	the Rise, Transformation and Future of the Nation-State (DA)	Anthropology of Conflict —Or— Culture and Influence (DA)	Track Option (DA)	Trust, Influence and Networks (DA)	Track Option (DA)	Political Anthropology
Technical Writing and Composition (DA)	Warfare in the Information Age (DA)	Analytical Methods (DA)	International Terrorism (DA)	Militaries and Technological Change (DA)	Thesis Research	Religion, Politics and Collective Action
Modeling for Military Decision-Making, I (DA)	Modeling for Military Decision-Making, II (DA)	Models of Conflict (DA)	Psychological Operations and Deception (DA)	Thesis Research	Thesis Research	Regional Seminar in Terrorism and Irregular Warfare Warlords, Militias and the State American Approaches to Small Wars Ethnic Conflict Coping with Wicked Problems

DA = Defense Analysis Department NWC = Naval War College

Department of Defense Analysis

Degree: MS in Defense Analysis (Information Operations)

QT1 Summer	QT 2 Fall	QT3 Winter	QT 4 Spring	QT 5 Summer	QT 6 Fall	Track Options
Seminar in Guerrilla Warfare (DA)	Organizational Design for Special Operations (DA)	Computer Network Attack and Defense (DA)	Deception, Surprise, Attacks & Counter-Deception (DA)	Critical Thinking and Ethical Decisionmaking (DA)	ILE (NWC) —Or— Track Option (DA)	Special Topics in Information Operations
Deterrence, Compellence, & Crisis Management (DA)	The Rise, Transformation and Future of the Nation-State (DA)	History of Special Operations (DA)	Jihadist Information Operations (DA)	Conflict in Cyberspace (DA)	Public Diplomacy, the Media and Psyop (DA)	Information Operations Planning (IW) Geo/Temporal Aspects of Dark Networks
Technical Writing and Composition (DA)	Warfare in the Information Age (DA)	Analytical Methods (DA)	Anthropology of Conflict —Or— Culture and Influence (DA)	Special Information Operations (DA)	Thesis Research	Tracking and Disrupting Dark Networks
Modeling for Military Decision-Making, I (DA)	Modeling for Military Decision-Making, II (DA)	Models of Conflict (DA)	Regional Seminar in Terrorism and Sub-state Conflict (1 of 5 Regions) (DA)	Thesis Research	Thesis Research	Concepts in Information Operations Culture and Influence Jihadist Information Operations, II Trust, Influence and Networks

DA = Defense Analysis Department NWC = Naval War College

January 26, 2011

Department of Defense Analysis

Degree: MS in Defense Analysis (Terrorist Operations & Financing)

QT1 Summer	QT 2 Fall	QT3 Winter	QT 4 Spring	QT 5 Summer	QT 6 Fall	Track Options
Seminar in Guerrilla Warfare (DA)	Organizational Design for Special Operations (DA)	International Terrorism (DA)	Terrorist Financing and Operations (DA)	Critical Thinking and Ethical Decisionmaking (DA)	ILE (NWC) —Or— Track Option (DA)	The Rise of Religious Violence Culture and Influence
Deterrence, Compellence, & Crisis Management (DA)	The Rise, Transformation and Future of the Nation-State (DA)	Geo/Temporal Aspects of Dark Networks (DA)	Tracking and Disrupting Dark Networks (DA)	Trust, Influence and Networks —Or— Advanced Social Network Analysis (DA)	History of Special Operations (DA)	The Theory and Practice of Social Revolution Religion, Politics and Collective Action
Technical Writing and Composition (DA)	Warfare in the Information Age (DA)	Analytical Methods (DA)	Anthropology of Conflict —Or— Culture and Influence (DA)	Jihadist Information Operations, I (DA)	Thesis Research	Political Anthropology Countering International Terrorism
Modeling for Military Decision-Making, I (DA)	Modeling for Military Decision-Making, II (DA)	Models of Conflict (DA)	Regional Seminar in Terrorism and Sub-state Conflict (1 of 5 Regions) (DA)	Thesis Research	Thesis Research	Jihadist Information Operations, II Coping with Wicked Problems Visual Analytics

DA = Defense Analysis Department NWC = Naval War College

January 26, 2011

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